

THE GLASGOW SCHOOL OF ART

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A SURVEY AND REPORT ON
THE CENTREPIECE OF THE
GLASGOW SCHOOL OF ART

DISSERTATION
presented to the
MACKINTOSH SCHOOL OF ARCHITECTURE
for the
HONOURS DEGREE IN ARCHITECTURE
by
JOHN HARRIGAN
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AIMS OF THE STUDY

For many years the Glasgow School of Art has stood like a giant in Glasgow, towering over the lives of students and professionals, alike. There can be no doubt that the building has not only exerted a great deal of influence but provided an endless wealth of architectural insight into design and construction, which has inspired local and foreign parties to pilgrimage to this building to seek out architectural philosophies of the past, present and future.

It is of great credit to the Architect that the building has survived the testimony of time, still in almost, original working order, when buildings of similar age are currently being disregarded or converted to meet the changing pace of life. This building stands timeless, in the certainty that in future years it will still be providing the same function as it was originally intended; an Art School. To find out what gives this building that unique quality to survive, it is vital to comprehend the skill in which Mackintosh conceived and designed the building.

By making an analysis of a monument of the past, such as the Glasgow School of Art, we hope to understand the way in which Mackintosh the Artist, worked from the design transfiguration and creative process to the complete Architectural composition and design of the building. It is hoped that in doing so we can discover and convey the roots of his stylistic expression/.....

so that an overall picture of Mackintosh's creation can be fully appreciated.

It is from the privileged position of being an architectural student at the Glasgow School of Architecture that this examination of the Glasgow School of Art is based. The overall strategy of the research is to dissect the building into logical workable sections, namely, the East Wing, Centrepiece and West Wing. These sections are allocated to interested students, who carry out the careful investigation of spacial analysis, technical function and human values. The information gathered in written and drawn form will be amalgamated at a later date to form a complete and comprehensive guide, to architectural composition and design of one of the most famous buildings in Glasgow. The overall aim, therefore, is to provide a foundation of a methodology which can be applied to any building or architectural entity.

The section, which I shall be concentrating my investigation on, is the Centrepiece of the Glasgow School of Art and the form of the work will comprise of a written text and accompanying analitical drawings. Although, much work has been accumulated and documented on Mackintosh, since his speedy rise, to local and international fame since his rebirth in the 60's, much of that work lacks any architectural critique; it merely accounts and records information.

Therefore/.....

Therefore, the report shall try to provide the cutting edge, with the drawings, in formulating the critical analysis. So old ground will not be covered but sifted through to concentrate on the roots of Mackintosh's stylistic expression. The report will compromise of the necessary background information regarding the personality and character of Mackintosh and providing the circumstances in which the building evolved in Glasgow in the 1890's on to the detailed critical analysis of the materials and spaces; to the relevance the building has to offer a different generation of architects in 1990's.

The drawings will convey the visual record of how the building stands in 1987, including all the changes, which have taken place since its construction. They are not produced merely to highlight discrepancies of past measured drawings but are a set of completed drawings of an important section, of the building which has been fully explored and documented and at a later date will be added to the drawings of both wings. The Glasgow School of Art building should not be presented, as in previous years with the same haphazard set of drawings, gathered from different people, from different years and in various scales. The drawings, as a set, should show the special qualities and perception, Mackintosh instilled in his building and how the building has survived the passage of time with dignity and resolve.

Therefore, /.....

Therefore, it is hoped that the report and drawings together will convey the uniqueness of a building,

"located on a particular hill
in a particular town, in a
particular culture, at a
particular time".¹

and leads to a better understanding of the architectural composition and design of a building.

CHARLES RENNIE MACKINTOSH

Charles Rennie Mackintosh has returned from a period of utter neglect, during the 1930's, 40's and 50's, to a point where it is almost impossible to find anyone who will not admit to an enchantment with his art. His name was effectively censored, by the established architectural profession of Glasgow and even by those who had been closest to him. His work suffered the wrath of local Authorities and Planners with their urban policies, to cope with the changing social and economic pattern of society, that they rendered buildings obsolete and at risk of demolition. His estate, held at the time by trustee, William Davidson was so apalled at Mackintosh's treatment at the hands of the most upright city institutions, refused to release any of the items in his possession for public scrutiny.

This lack of appreciation was further seen in the 1940's when the acting Director of the Glasgow School of Art, opposed efforts by Thomas Howarth, a member of staff and subsequently, Mackintosh's biographer, to commemorate his association with the Art School in exhibition. There was even, no reference to him, for example in the prospectus of the Art School, until 1960-61; which sounds inconceivable today. This neglect and indifference on the one hand and the over protectiveness on the other prevented Mackintosh reaching a wider public. It was not until Nikolaus Pevsner and subsequently, Thomas Howarth that Mackintosh/.....

Mackintosh began to get the credit he deserves.

Precursor of the Modern Movement, he now holds out the nostalgia of an architecture of lyrical and tender care for every aspect of building, from arrangements of space and massing, judicious union of traditional and modern materials and techniques to a symbolist ornamental style that bathed everything it touched in a mysterious, yet hypnotic air of myth, legend and poetry.

He was a genius in his time working in Glasgow practising a style of architecture and interior design foreign to the conservative tastes of Victorian England.

Mackintosh was an intensely dedicated man, brought up on the Presbyterian values of frankness and integrity. Together with his brooding temperament and quick tongue he tended to be more sombre than was usually the case. He had a deep perceptive mind and could do all things that qualified him for the title "Artist". He designed buildings, furniture, cutlery, murals, stained glass, metalwork, doorknobs and light fittings as well as posters, line drawings, water-colours and gesso panels. He was deeply committed to the idea of an architectural and artistic expression and utterly scornful of the glib facility which characterised so many of his contemporaries.

His deep love of nature, remained and flourished with him throughout his life. He delighted in drawing from nature and acquired remarkable ability with the pencil, for quick and accurate sketching./.....

This proved a valuable complimentary to his highly developed powers of observation and examination of nature and buildings. This became an important bearing on his subsequent work, through his recordings in his sketchbooks, which he used as sources of information and inspiration.

GLASGOW in 1990

The 1990s

It forms

can help

community

aspirations

the 1990s

distinction

Alison

It is

that is

and 1990s

Glasgow

spaces

and 1990s

provision

shipyard

heavy 1990s

grace 1990s

Chapman

was the 1990s

various

is now

all 1990s

GLASGOW AND SCOTTISH INFLUENCES

in the 1990s

GLASGOW in 1890's

The architectural background of a City is important. It forms a setting for all human activities and the architect can help promote the spiritual and material well-being of any community by providing an environment suited to its needs and aspirations. This in turn reacts on the individual. Only the diverse Glasgow background could produce three such distinguished, striking and contrasting personalities as Alexander Thomson, Sir John Burnet and Charles Rennie Mackintosh. It is difficult to conceive them as products of any City other than Glasgow., with its inherent regard for experiment, invention and freedom of expression. Well into the nineteenth century Glasgow was a thriving metropolis, with public parks, and open spaces, civic blocks of stone built terraces, mansions, houses and public buildings that could hardly be equalled in any provincial city in Britain but Glasgow had another face, one of shipyards, heavy industry and working-class tenements. Its heavy commercial buildings malingered under a layer of atmospheric grime and perpetually sulphurous sky. In many ways similar to Chicago, the second City of America, Glasgow could boast that it was the second City of an entire empire - a boast to which its various business enterprises all lent their accumulated weight. It should also be pointed out that it achieved this position some 40 years before direct rail links with London were established.

"Glasgow was the commercial capital of a part of the Empire in some ways as remote from London as Philadelphia had been, and much that happened in the political capital of the Empire meant little to the people in the North".²

The social and economic conditions of Glasgow, is of great importance, for it seemed it was riding high on the crest of a permanently advancing prosperity. It was the focus of activity not only in Scotland but Ireland and North England; it had also established trading centres in all major countries of the world and was pushing forward into new countries. The climate of innovation and experimentation in new materials of construction helped Glasgow develop and capture markets far ahead of any rivals.

One of the roots of industrial change in Glasgow, from textiles, lay in the large scale expansion of production of cheap iron, which acted as a stimulus to coal production, railway production and provided raw material for shipbuilding. The confidence of heavy industry echoed by their fellows in business and commerce, found vigorous expression in the expanding physique of the City.

The river Clyde, was the source of the wealthy rise of Glasgow with an abundance of goods pouring in from countries around the world. The links Glasgow established with her European counterparts had a tremendous impact on the expansion of the City which took a decidedly European flavour. Glasgow proved it was and still is possible to win international fame without first being recognised by the Establishment in London. This separatism from London enabled Glasgow to extend and compound its links, with France, Italy, Germany and Austria and further to the America's and east to Japan; which extended considerable influence in Glasgow.

The exhibition of 1888 in Glasgow was described as oriental and two of Glasgow's painters, A.E. Hornel and George Henry visited Japan in 1893 and gave a series of lectures and exhibitions which Mackintosh undoubtedly attended. Mackintosh's indebtedness to Japan is quite clear, especially in the shield forms on the railings of the Glasgow School of Art which was researched by Hiroaki Kimura.

It was in this atmosphere, that Mackintosh was able to develop for a time with the main connection being with the Continent rather than England. Hence the reason why Glasgow developed as a City more in the European mode rather than the English type and why Mackintosh was more famous on the Continent.

There was no more progressive architect or designer working in Britain round the turn of the century and none more inspired in Europe. It is not inconceivable, however, that Glasgow would have become a centre of the decorative arts at that time, even without his influence. The talent, the commercial motivation; the visual awareness, the teachers and the craftsmen were all there. Although, Glasgow without his innovatory genius might not have developed its own characteristic style in design, its arts and crafts would certainly have flourished.

CONTEMPORARIES IN GLASGOW.

Alexander Thomson was highly regarded by his contemporaries in Glasgow and often imitated before and after his death in 1875. Few architects appear to have been aware of him as an influence. Today, his architecture seems ahead of his time, not only in freedom and daring of his use of new kinds of expressive detail and new ways of handling materials, but above all in the recognition that architecture, could not grow merely by playing variations on traditional themes in the manner of the fashionable revivals of the period.

It is here, that his influence on Mackintosh suggests itself, for he too applied himself to these ideals and principles, which put him ahead of his rivals. It is not in the extraction of his details as a source but as an innovator who contributed something original to the development of architecture. Mackintosh's ideas continuously evolved to generate new ideas, gathering information from most unlikely sources and converting them into his own language.

Peter Nicholson, David Hamilton, William Stark, John T Rothead, Charles Wilson and James Sellars, were the notable local architects largely responsible for the nineteenth century architectural background in Glasgow, when Thomson was designing his masterpieces and when John James Burnet and Charles Rennie Mackintosh began their outstanding careers.

Of Thomsons' /.....

Of Thomson's successors' the most obvious classicist was James Sellars. Mackintosh came under his influence at an early stage, with its mixture of neo-Grec and Beaux-Arts styles. In his various competition projects and scholarship designs, Mackintosh worked through a representative range of contemporary Glasgow styles.

Mackintosh was seven years of age, when Thomson died in 1875 and John James Burnet at sixteen was about to depart for his academic course at the Ecole des Beaux Arts, Paris. An outstanding and most important 20th century classic architects, who, in his work, attempted, by a change in mood, to bridge the gap between the "old" and the "new". The influence of Burnet is apparent in the proportions of the external doorway in the Glasgow School of Art but the architectural greatness of Mackintosh lies in the fact that by the time he was 26, he was able to discard practically all traditional classic form and detail but unlike many modern architects who have done the same thing but put little or nothing in their place, his fertile imagination created by sheer invention a new and apparently unlimited vocabulary the needs of all occasions.

Mackintosh owed much to the friendship and support of Fra H Newbury and to his employers and partners Honeyman and Keppie. So far relatively little attention has been paid to the designs of Honeyman and Keppie's office. They have been generally regarded as "work at the firm". It is wrong however, to look at them as such for they tell us a great deal about Mackintosh's development. Honeyman was an/.....

Honeyman was an Italian Renaissance and neo-classical man; a very able Goth and interested in the modern movement. He was a versatile and accomplished designer and by no means adverse to experimenting with unorthodox materials and methods of construction. Nearly all the important jobs after 1890 were handled by Mackintosh or Keppie; who was a rather unimaginative follower of Sellars and J.J. Burnet. Keppie had a continental training and designed mainly in the classical manner but he had a pedantic nature. There was however, an exceptional friendship between Keppie and Mackintosh, for a while.

There is a subtle gracefulness, a feminine lyrical quality in all Mackintosh's work. This is, no doubt, due to his early association at the School of Art with the work of the Macdonald sisters, Herbert McNair and later Jessie M. King and others working in the Scottish and Celtic Arts and Crafts in Glasgow and elsewhere in Scotland at this time. Perhaps he owed most of all to Margaret Macdonald whom he married in 1900; probably on the strength of the School of Art job.

VERNACULAR ARCHITECTURE

Several influences account for the remarkable personality of this great artist, most of them local, least of all continental. Instead of the imported classic he sought inspiration in the character of the vernacular Scottish Buildings of the 16th and 17th centuries. Its soaring nature and the simple geometrical composition of the work of this period appealed to him. It does not appear that he ever used the characteristic Scots crowstep, the edge, was to him a ragged disturbance to solidity and to the continuous unifying flow of line for which he consistently sought. Mackintosh only defended the past in so far as it was living and likely to live. He ignored the small Scottish corner-turret, embattlements and other historical elements, as features of a dead past, outworn and useless but he respected the directness, the simplicity and other bold enduring qualities of Scottish masonry.

"In variety of expression the Scottish style is very versatile, being equally capable of the most stern and majestic severity, and the most exquisite and refined elegance as well as all the intermediate varieties. In beauty of external outline, grouping of parts, boldness and variety of conception, very few styles approach it".³

Mackintosh took himself on study tours of not just Italy but Southern England/.....

and returning home, with obligatory note books filled with sketches of half-timbered cottages, moss encrusted rooftiles, clapboarded fascias and thatched roofs. Olde England was being pursued with almost religious fervour by the most progressive architects of the day. But, to his perception of England, Mackintosh brought his basic Scottish background and it was this background which allowed him to interpret the wealth of English vernacular architecture.

His study trip to Italy in 1891, six years before his design of the Glasgow School of Art. The importance of this trip tends to be overlooked by most contemporary writers, for it made a deep and lasting impression on him, as his work, on his return was more confident and mature. His sketch book of the tour, showed and extreme catholicity of taste, with great interest and enthusiasm for the Michelangelo. There is at least one instance where a direct comparison can be made, and that regards the seating arrangements along the corridors of the Glasgow School of Art. With large windows overlooking the South of Glasgow it typifies the Italian scene of the arched opening enclosing the brilliant view over the Italian countryside, bathed in illuminating sunlight and deep shadows

SOURCES AND INFLUENCES

The question of sources and influences is always a difficult one. Especially, when celebrated Authors have gone to seemingly endless lengths to draw comparisons between the Glasgow School of Art and the buildings designed in England. They tend to trundle out the same old list of architects, who in some way have produced the detail before Mackintosh. R. MacLeod, pushes Lethaby and Voysey, D. Walker gives endless sources regarding the facade and decorative details and Dr. Howarth, whose writings are still the most comprehensive and detailed lack any real architectural criticism. They should possibly, direct their resources into the fact Mackintosh was the finest architectural innovator of the time and it was he, who was generating the influence. Anyway, to indulge in the question of origins in this text would prove fruitless as every possible connection has been sought and detailed before.

Thomas Howarth, Mackintosh's most important biographer, speaks of the building as its

"synthesis of traditional
craftsmanship and 20th century
engineering".

and rightly calls it

"the first important architectural
monument to the new movement in
Europe".⁴

whereas all Mackintosh's

Whereas all Mackintosh's Victorian predecessors had synthesised combinations of the fine basic architectural styles achieving excellences that, with the exception of Thomson's work had no continuing personal "thumbprints". Mackintosh's synthesised feelings had achieved a new and instantly recognisable individuality. Even the greatest artists show their influences from time to time, since like art, like life, it is a continuing process. Yet what ultimately matters in art is not which influences show, but what asserts its own life.

BRIEF and COMPETITION

The School of Art had steadily grown in numbers up to the 1890's, when it had outgrown its makeshift home in Sauchiehall Street. In 1896 an important but limited competition took place for the building of a new School of Art, in Renfrew Street, under the guidance of the Director, Fra H. Newbury. An awkward site of 3,000 sq. metres was offered to the Governors, with a steep slope of about 9m to the south. there was very little money available, in all, about £21,000. and

"that sum will suffice to erect only a plain school
it will not even equip this bold erection in adequate
fashion."⁵

and, the competitors had to indicate how much of the building could be erected for £14,000.

Fra Newbury gave the competitors indications on the size of studios, and the size and nature of the windows, and it was stressed that it was a "plain building" required. The number of Architects who submitted were eventually, eleven and after much consultation the winners were announced, Messrs. John Honeyman and Keppie.

The winning design was obviously by Mackintosh and while the design must have stood out startlingly from the others, we should not imagine them all as exponents of neo-classicism. Architects such as H. E. Clifford, Henry Mitchell, Salmon and Anderson had already shown direction towards the modern movement.

Mackintosh's winning design was amazing in its simplicity and superficial unorthodoxy. the drawings demonstrated that he still compromised/.....

still compromised on certain details. To Mackintosh it indicated an intention ; and that intention remained influx, subject to refinement and improvement as the building details emerged, until the physical completion of the fabric.

Contrary to frequent assertions, Mackintosh was fortunate in Glasgow. Not many established practising Architects would entrust a young Draughtsman with the freedom and opportunity to carry out work on his own and submit competitive designs in the firms name. There are however two factors in Mackintosh's favour firstly, the office was very busy and the project was in no way an enviable one, and in financial terms, both a small job and relatively demanding. Secondly, the design had to be achieved virtually by simple mass and void, had it not been for the peculiar nature of the competition, it is possible the Mackintosh's style (except his internal decorative aspects, as they were already well advanced), would have become established later rather than it did, and such drastic simplification would not have been acceptable to the Partners.

The design at once became the centre of a stormy controversy. It was forthrightly condemned from the Architectural standpoint as a wholly reprehensible excursion into l'art nouveau and moreover, it was well known that Newbury had done everything in his power to secure Mackintosh's design as the one worthy of his School of Art.

THE DESIGN

The result of the design, in 1897, was a simple, logical, E - shaped Plan with its arms pointing due south and the main stem pointing north. The interior, an elemental plan, with large studios connected with wide corridors, which run from the entrance hall and a large open exhibition space above it, on the first floor. The distribution on the large important areas having been determined, Mackintosh begins his investigation into every aspect of the spaces. It showed a whole new approach to design, moving from the inside out and letting the function dictate the facade, but in saying that, the exterior is not a haphazard punctuation of holes, but a functioning grid and moulded frontispiece modelled on the same guiding principles as the interior.

The building, constructed in two stages, was designed as a whole in 1896 and modified as work proceeded. The first section began in 1897 with the east wing up to and including the frontispiece which was completed in 1879. This part of the building stood rather awkwardly for eight years, before the second stage began in 1907. This section shows the development and maturity of Mackintosh's skill of moulding spaces both inside and outside, climaxing with the Library.

The two phases show Mackintosh advanced as an inovator in the manipulation of materials, construction and space. The complete lack of fuss, the directness of vision brought about a solution of functional directness to the problem of shape and form.

One of the most fundamental problems in designing in Glasgow is the physical nature of the site. For in Glasgow more than any other large/.....

other large City in Scotland, hills determine the special character of Glasgow's townscape. It is Mackintosh's wonderful feeling for the site that enabled him to capture that "Scottishness" that is so often expressed about the building. Which allowed the building to express itself in a dignified manner clarifying many of the functional constraints imposed by the brief. One of which had a fundamental decisive influence on the modern era - economics.

At a time when the unselective use of forms, were being plucked from the most varied of styles of the past, with no regard for the inner spirit of forms or material; and when Art Noveau on the Continent was primarily concerned with the redefinition of style, Mackintosh reached out to the future and projected a building, revolutionary in shape and form.

Revolutionary to the Art Noveau Architects / Artists, Horta Van de Velde and Guimard, because they had not yet shown a conscious adaptation of the idea of space as an aesthetic one. Yet there dynamic spatial compositions broke the static lifelessness of all neo-classic tradition. All was change. All was movement. Their first concern was to do away with the eclectic confusion of the 19th C. They dealt with craft, abstraction, natural growth, nature of materials, artistic emotion and symbolism. In short they dealt with substance and the continuity of substance.

It was, however, MacIntosh's ability to capture the compositional flow of spaces and to engage in the process of building and production which raised him to a higher level of substance.

Indeed, he created an aesthetic, which gave subsequent designers and craftsmen a goal to aim for, just as the Bauhaus was to do. Mackintosh tended towards, as Gropius, to concern himself with problems of spacial organisation and to arrive at the most economical use of space and time.

EXTERIOR

Some of the work in this building is among the best he ever did and for perfection in accurate detail and execution, it comes close to the work of Horta and Berlage, but in simplicity and sensitivity it surpasses them. Studying the facade, there is something about its severe line, which is enhanced by the subtle setbacks and the recessions over facades.

The proportion of wrought iron to masonry seems right the brackets projecting from the first floor studio windows, the ornamentation on the railings and the lamp, suspended precariously over the main entrance steps. The railings on the street, which protect the lightwells, have a rhythmical refinement of unbroken vertical lines, which playfully guide the visitor towards the entrance. This row of highly decorated railings together with the window brackets, reveal how Mackintosh thought about the spatial value of the facade, for it brings a very tall and overpowering building down to scale with the street.

The doorway appears small and insignificant but in fact stands out in a deliberate fantastical manner, between the bold fenestration of the studio windows. Approaching the entrance steps they curve out to welcome the visitor to guide them towards the entrance while skilfully narrowing to enhance your feeling of penetration. The doorway is beautifully articulated with carved architraves rising and surrounding the door to encompass a keystone depicting two voluptuous female figures.

The domestic quality at the frontispiece is emphasised by the reduction of the window openings in the oriels and the moulding of the circular headed French window on the first floor. This special area, the Piano Nobile, is occupied by the Director, who receives prime position in this remarkable composition.

In this composition, Mackintosh has incorporated his skill and ingenuity, in handling the mass and space. It is evident from the elevation, that he has rejected the form of designing, outside-in; of the eclectic styles and designed from the inside-out; thus manifesting the reality, instead of the fake. Thus architectural mass is a secondary result of the interior mood of the space, contained within and the balance of the materialist interpretation of the interior and exterior spaces have been achieved by exceptional talent.

The centrepiece tells a story of simple logic, of straight-forward vertical planning, which was unique, at this time and to incorporate it, so majestically into a public building is truly a remarkable feat. The divisions of the horizontal and vertical planes relating to the public and private functions internally, again show how MacIntosh is using a higher order, not only to express the space and corporeal mass but he also allowed it to influence the rational of the building programme. This manifests in the first floor balcony, which is a vertical demarcation of public and private domains. As with all Mackintosh's features it not only provides an outdoor space for the Director but acts as a hyphenate between the studio windows.

The domestic quality of the centrepiece, is derived from the aesthetic of the English House movement, where Mackintosh uses the oriel window to burst through the outside shell, recognising the principle;

that the interior space can be expressed on the facade, such ideas would be inconceivable with the neo-classical, building tradition of the time.

The facade moves up towards the Director's studio, where an internal space is created by stepping the wall back and creating a void, indicating a very private area. Above this the wall terminates with a triumphant sweeping gesture, of a cyma curve.

The turret, containing the private staircase to the Director's studio, reinforces his feel of Scottish vernacular, evoking feelings of medieval castles; and ingrained in a modern building, is a remarkable feat of ingenuity. The building Mackintosh's hands becomes abstract art both musical and mathematical. In 1896 when it was designed no one in Europe had produced a scheme of the originality and architectural quality. The unconventional facades, his free-planning and disdain of fashionable ornament seems far beyond his time.

INTERIOR

The entrance hall has a spiritual quality; where you are drawn through a vestibule, into a cramped, gloomy entrance hall only to be uplifted by the exuberance of the well-lit staircase. The hall has a double vault, which runs from the entrance to the stairs where it connects into the main link corridor, which serve the wings. You are naturally drawn to this cross-roads, where you are inevitably taken upwards, towards the light, however, the strong pull of the spacious, top-light corridors, provides the visitor with a moment of contemplation. Downstairs into the basement, which is never an easy step in any building, is encouraged by the way the timber panelling continues down the walls which suggests its part of one space connected to the museum.

The resolve of this junction, has a masterly touch, with his treatment of the surfaces, and his ability to work in three dimensions together with the contrast of light and shade, provide a hierarchy of clues to which way to move - and if this isn't enough the Porters box is on hand to help with enquiries.

The staircase is constructed entirely of timber together with the museum they form a fascinating catalogue of Mackintosh's influences and predilections; the modern medievalism of the heavy trusses, with their largely expressed joints and Japanese twinned beams, projecting and gripping the newls. There are no handrails but balustrades are taken through from sloping strings up to the first floor balustrade in very much the same way Voysey does in some of his houses.

Certainly, the spirit of many kinds of old works can be seen, although the forms are never quite the same. The whole approach to beam and column framing is reminiscent of the Japanese. The internal roof trusses over the well of the museum are built-up of heavy members, held together by thick wooden pins. Each King post has been moulded into a primitive tulip-shape. In addition, four carved pieces of wood are applied to each face; moreover, the silhouette of the truss itself has been modelled by the insertion of shaped webbing pieces, and the whole structural frame is carried on simple decorative corbels. The square newl posts all taper and are crossed by square caps, which draw the visitor continually upwards.

The Director's office is located at the top of the museum stairs, thus getting prime importance, as it rightly should. Before entering the office there is a dark panelled vestibule; a waiting area, which must have instilled a sense of trepidation or occasion in students before entering the office.

Macintosh has applied a high level of sophistication in the rational formulation of the sequence of spaces leading from the entrance to the Director's office. He has attached the main value to creating the space and enclosing it with walls, without the smother of a Victorian interior. There is a coalition set up between the space and mass and through the interplay of these two aspects, movement is stimulated which leads one irresistibly from one space to another.

"The aim of our creations,

is the art of space

the essence of architecture".⁶

This creation of flowing space is the essence, and Macintosh has achieved a continuity between the inside and outside. Enriched/...

Enriched by the contrast of light and dark you are aghast at the enormous pleasure you receive rising up the stairs towards the Director's office. Truly, a wonderful experience.

The Directors office as in most of his future rooms, the ceiling is modelled in such a way as to emphasis the function of certain areas. The recess into the window bay is clearly a writing or study space, marked by a shallow arch, considerably lower than the general level of the room. It springs from the top of the dado and creates a significant change in scale within the total space. Mackintosh gave such consideration to the size and location for the writing recess that it manifested itself on the exterior.

Once the interior attains the status of a work of art, that is, when it is intended to embody the aesthetic values, the artistic effect must obviously be heightened to the utmost. The elegance and lightness of his scrupulous attention to detail, for instance, the letter pulley from the Director's office to the enquiry desk; a studied harmony of parts, that constitute a unique and indivisible whole.

A continuing feature of Mackintosh's interior, is his use of a picture rail to define the space, this especially noticeable in the Director's room, where the area is small, and the picture rail sneaks round the room in a fluid rythmical manner. In all his interiors, the entrance hall, the museum, corridors and offices, the picture rail is the crowning point to the board panelling.

The picture rail/.....

The picture rail brings large heights down to human scale and provides a sense of security and comfort and also acts as a definition between the hanging boards and plaster.

MATERIALS AND CONSTRUCTION

The manifestation in the realisation of the material, construction and space, coming together as a totality, sets the Glasgow School of Art aside as a demonstration of innovative design and craftsmanship. The simple use of materials in their raw state, bare brick in the pavillion corridor, exposed steel roof tiles and rivits, the use of rough sawn timber and unfinished cement rendering and exposed joints, have allowed Mackintosh to exploit a state of ruthless economics. The result being a rugged workmanlike quality, entirely in keeping with their function and an exploitation of their inherent natural qualities.

From the dressed stone exterior, to the timber panelling interior, there is an honesty which creates an inner beauty found in every aspect of his work. The timber screen staircase of dressed yellow pine, originally stained dark brown and the solid wall panelling of sawn timbers set vertically and butt-jointed unite the space, in utility and purpose.

In the case of woodwork, Mackintosh abhorred the use of varnish or graining, he used either painted wood, enamel white or stains, usually black or dark olive green to reveal the grain of the wood. There is a crispness, an incisiveness, which we recognise as being wholly modern in feeling, even though, it is emphatically not revolutionary in intent.

The functional qualities of the materials and their use give the building a workable appreciation which is vital to a "living" building.

The disposition of hard, durable, cleanable materials, such as brick and render, into studio and corridors is offset by the warmer qualities of timber and plaster in more public and private area. The special character of Mackintosh rests as much in form, especially in his ideas about relationships between surface and decoration, as in colour. In both connections the keynote is a spacious, grandiose, almost mystical repose, broken only here and there by the application of a small decorative shape, which has the effect of a precious stone.

Repose is achieved by the use of broad unarticulated forms and a neutral background colour, such as grey, white or a brownish-grey. The strictly architectonic character stems from strongly emphasised rhythmic sequences, such as vertical or series of any similar elements (e.g. box-like lamp shades). Patterned materials are taboo, as is all mechanically produced ornament. The few decorative devices appear in the form of handmade panels appliqueed work in-lays, stencilled pattern, but they are always used sparingly and at isolated points. They are never more than mildly unexpected within, the great, restful whole. The decorated areas are vividly coloured in bright green dark pink or purple. The refinement that is achieved is convincing and in a way raises the use of colour and decoration to a higher plane, since it is used so sparingly.

More indicative of the direction which Mackintosh's style was moving, is clear in the Director's office. It is another white room, which was a straightforward reaction against the fussiness of usual Victorian interiors, with there heavily patterned and dull interior./.....

The office sparsely decorated , in white panelling, which is carried uniformly around the room, tying together all the features, achieving an attractive quality of poetical overtones.

Material and construction are sacred and in this respect never descends to the unnatural and artificial. Mackintosh was concerned with the qualities of material and labour and the value lay, mainly in its execution and workmanship . For Mackintosh regarded the building like a piece of clay, to be moulded to its ultimate form by the Architect and craftsman.

No matter how outrageous the distortion, the decorative details always spring from some functional or constructional demand, like the bell above the Porters box. A beautiful, decorative , example of the bending and shaping of wrought-iron, forming an outward rippling pattern, which when rings, vibrates to prolong the ringing.

The care and attention given to the junctions of materials reflects in the approach he had, to designing spaces; they flowed into each other, stressing the confidence he had in the limitations of material and realisation of the importance of the junction.

"The joint is the beginning of ornament.

And, that must be distinguished from decoration which is simply applied.

Ornament is the decoration of the joint".⁷

Another revealing aspect of the building is the plenum system of heating and ventilating.

Mackintosh treated the system as a fundamental design consideration and integrated the outlets into the overall design of the rooms. The duct runs under the central corridors at sub-basement level, which is over 1600m high and the full width. Large fresh air grilles are located beside and below the main entrance and the main duct fed through vertical branches, built into studios, through grilles, specially decorated. The system has since been abandoned some years ago and a modern system installed, hence the alterations to the sub-basement and basement.

CONCLUSION

Mackintosh is now universally recognised as a pioneer of contemporary architecture and by many purely, "functional" modernists, who claim to worship his name, but choose to ignore or misinterpret the full message of his art.

"Architecture is the world of art and
as it is everything visible and
invisible, that makes the world,
so it is all the arts and crafts
that make architecture".⁸

Architecture is an art not a science. It arises when the structure, the arts, the crafts and services are orchestrated into harmony to produce a theme, principally by the requirements of the client, who calls the tune. The wall-treatment, texture, enrichment, furnishings and furniture form integral elements of the harmonious Mackintosh conception; the flowering of an original and creative architectural mind of a high order. Mackintosh's imagination and vocabulary embraced all the arts and all the crafts and he introduced most of all, features which contemporary architect's today consider "modern".

He strove to infuse new life into a profession that had become overburdened with the shackles of historicism, and which had struggled through a series of revivals and revivals of revivals, until the treasure chests of ancient Greece, Rome and Byzantium/.....

had been exhausted of her priceless gifts. He sought his inspiration, not in the copy-books of the profession with their archaeological exactitude and subservience, to the tenets of the classic and gothic style - whichever happened to be in fashion - but in the traditional architecture of his country and in the ever varying glyptic forms of nature. Unfortunately, he was given few opportunities to exercise his genius in the design of public or semi-public buildings, so Glasgow School of Art must rank as one of his major successful works.

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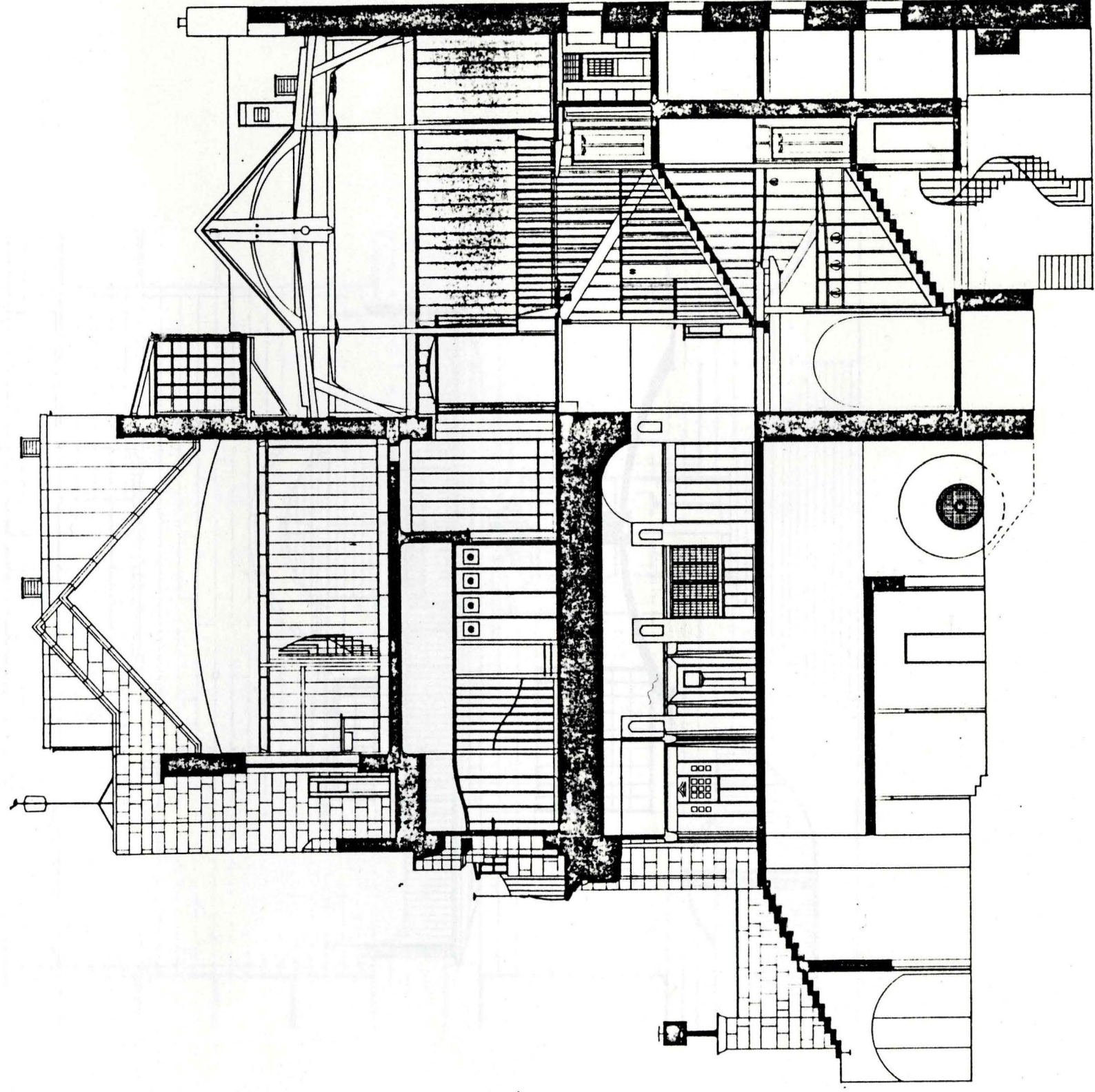
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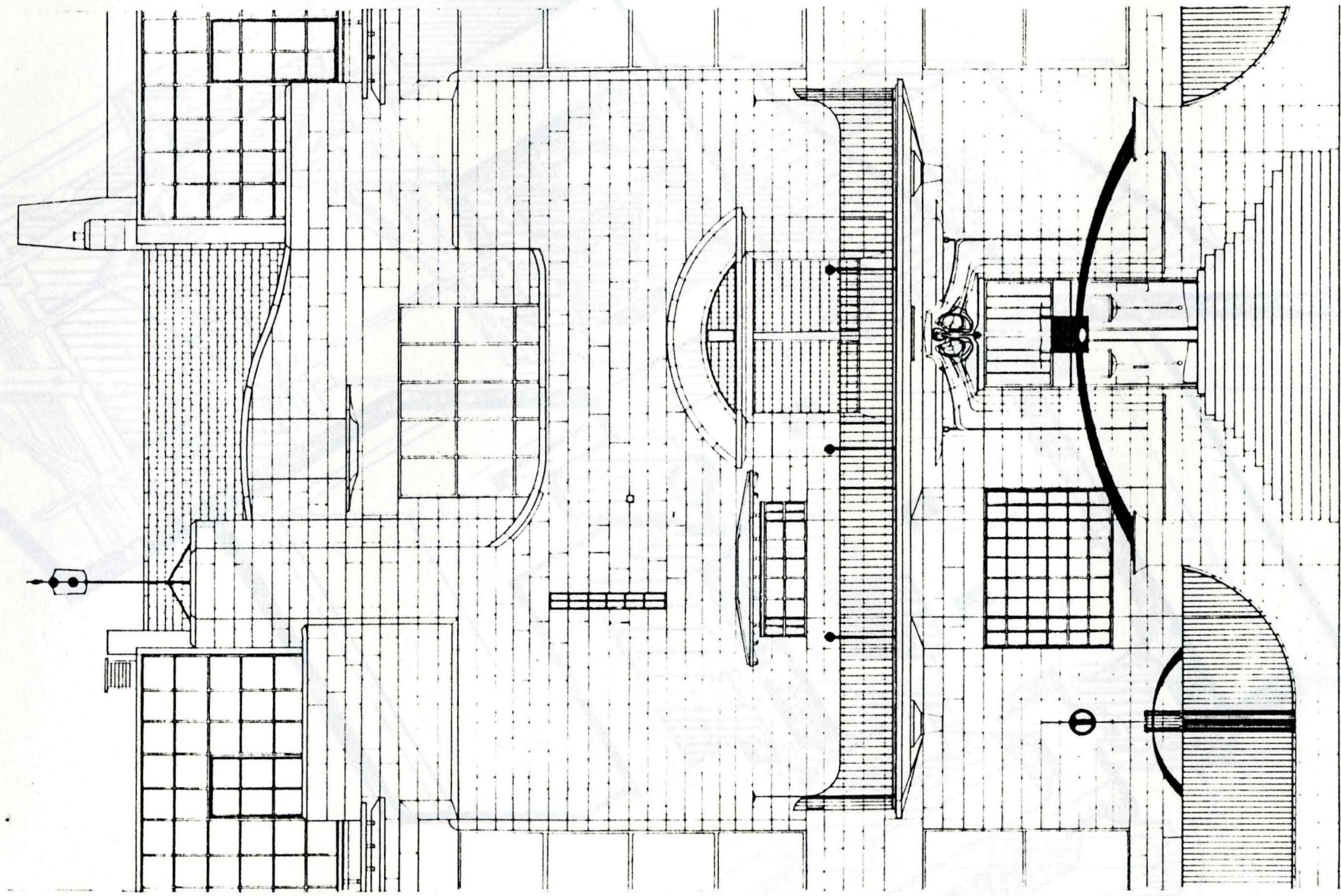
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| 3 | SECTION THROUGH ENTRANCE |
| 4 | FRONT ELEVATION - CENTREPIECE |
| 5 | REAR ELEVATION |
| 6 | ROOF PLAN |
| 7 | SECOND FLOOR PLAN |
| 8 | FIRST FLOOR PLAN |
| 9 | GROUND FLOOR PLAN |
| 10 | MEZZANINE FLOORS |
| 11 | BASEMENT |
| 12 | SUB-BASEMENT |

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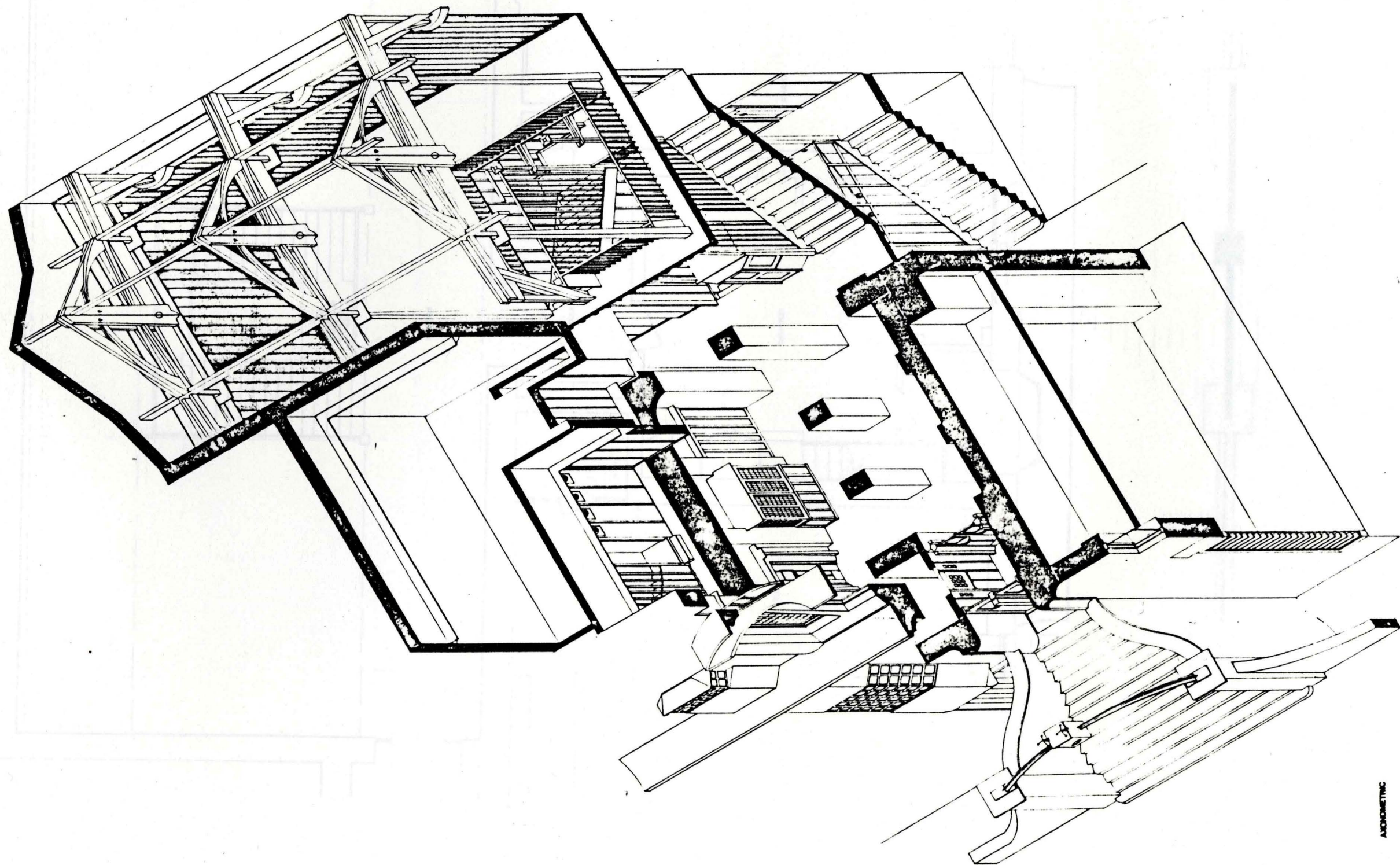
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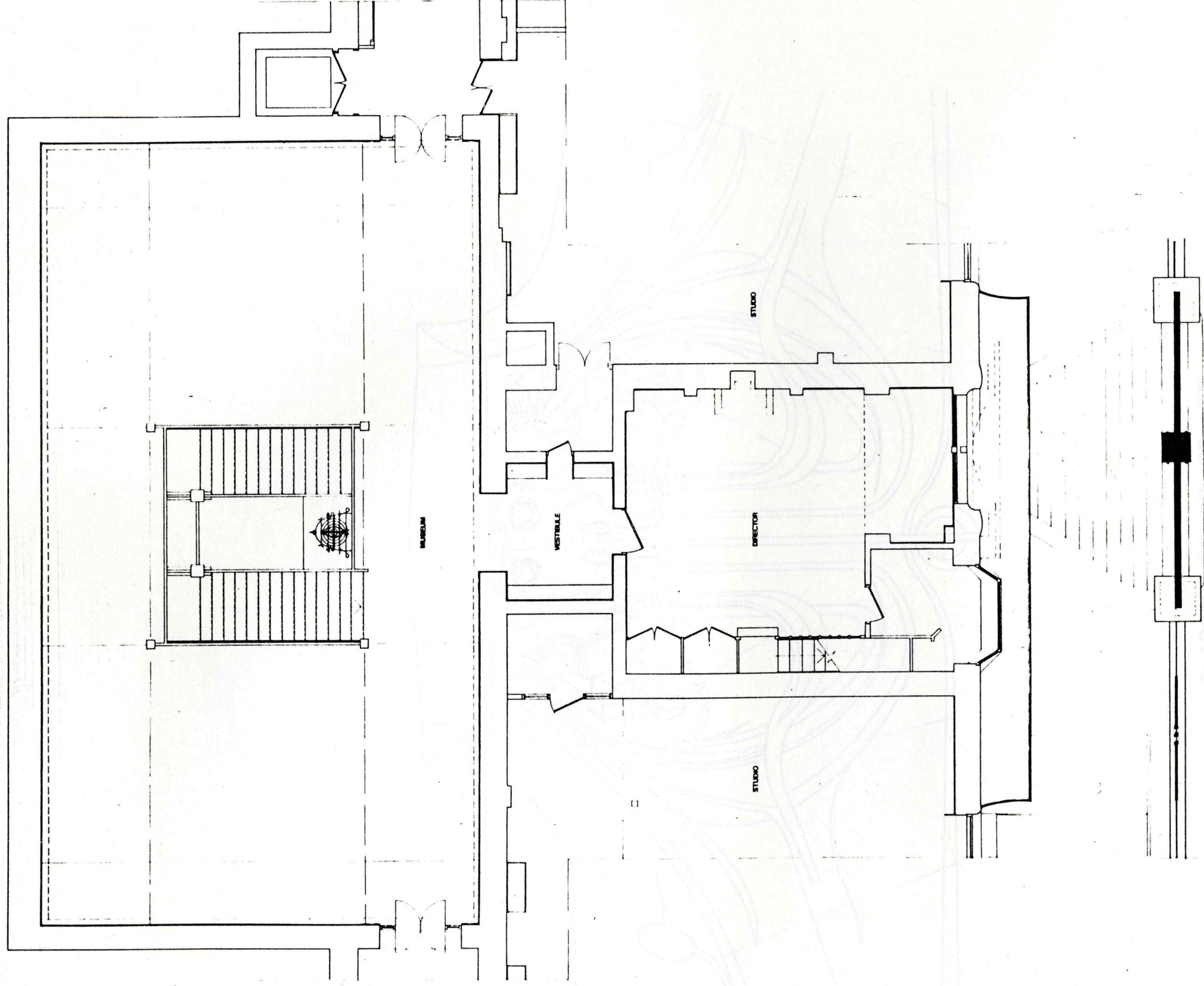


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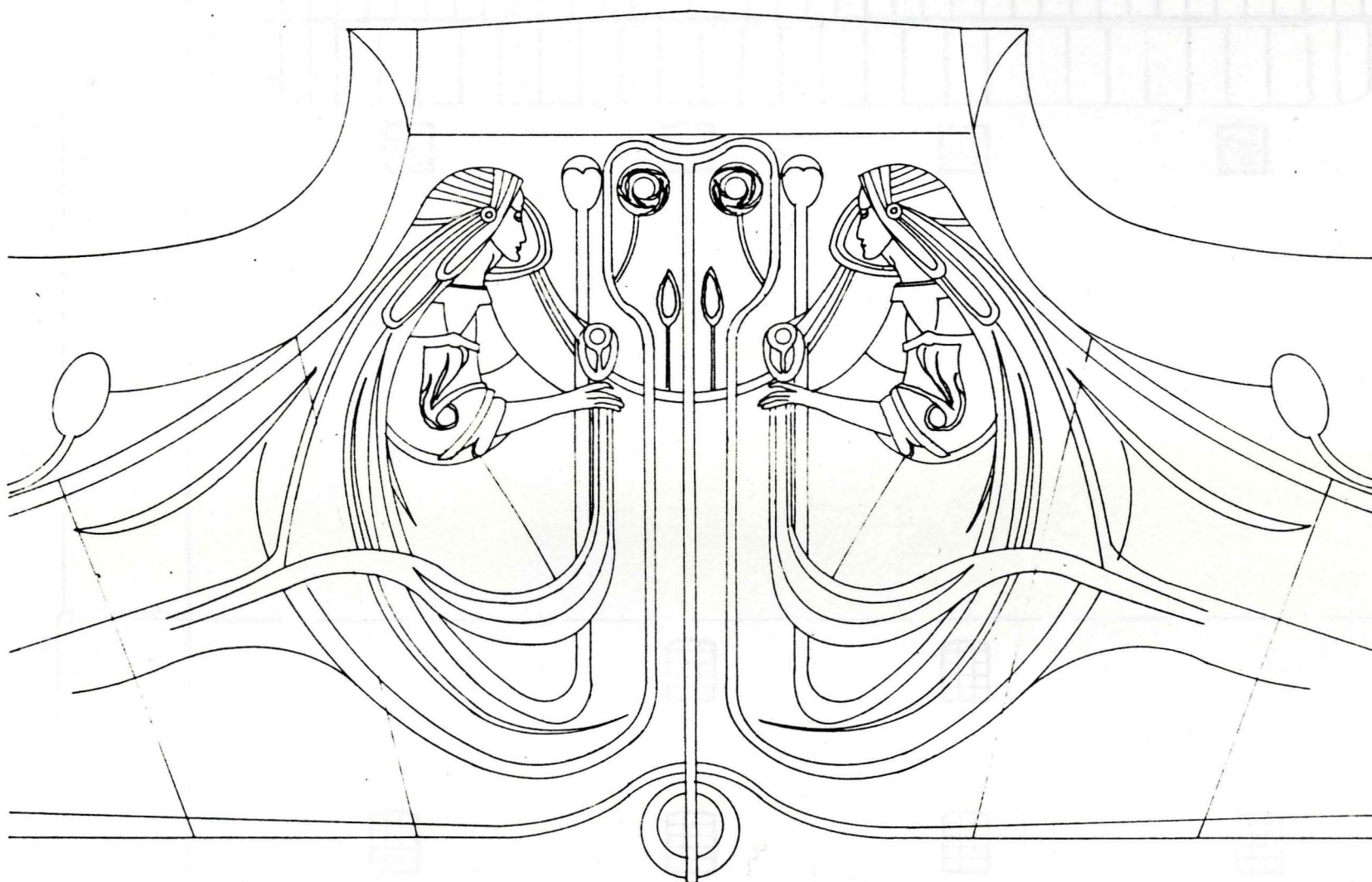


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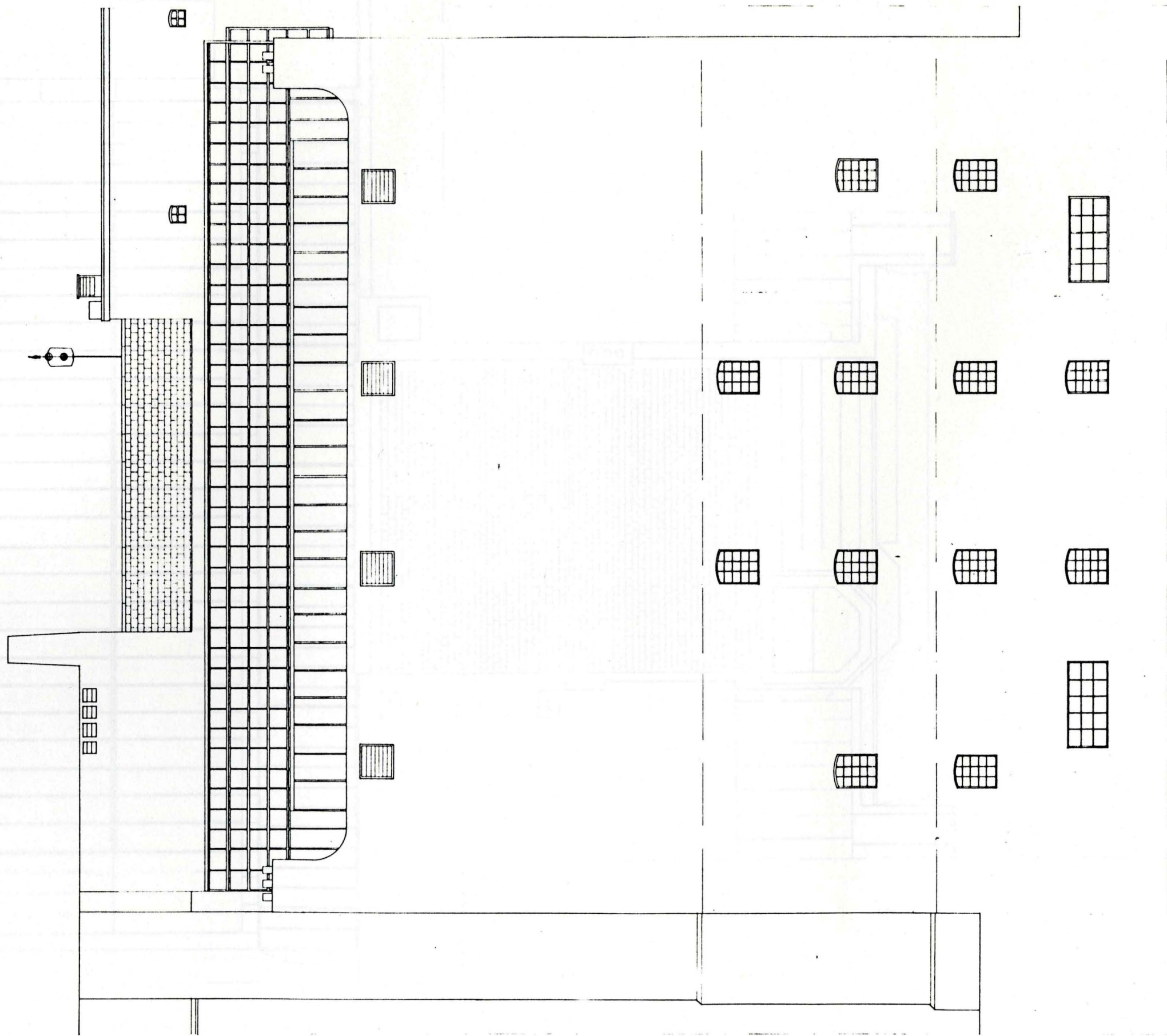




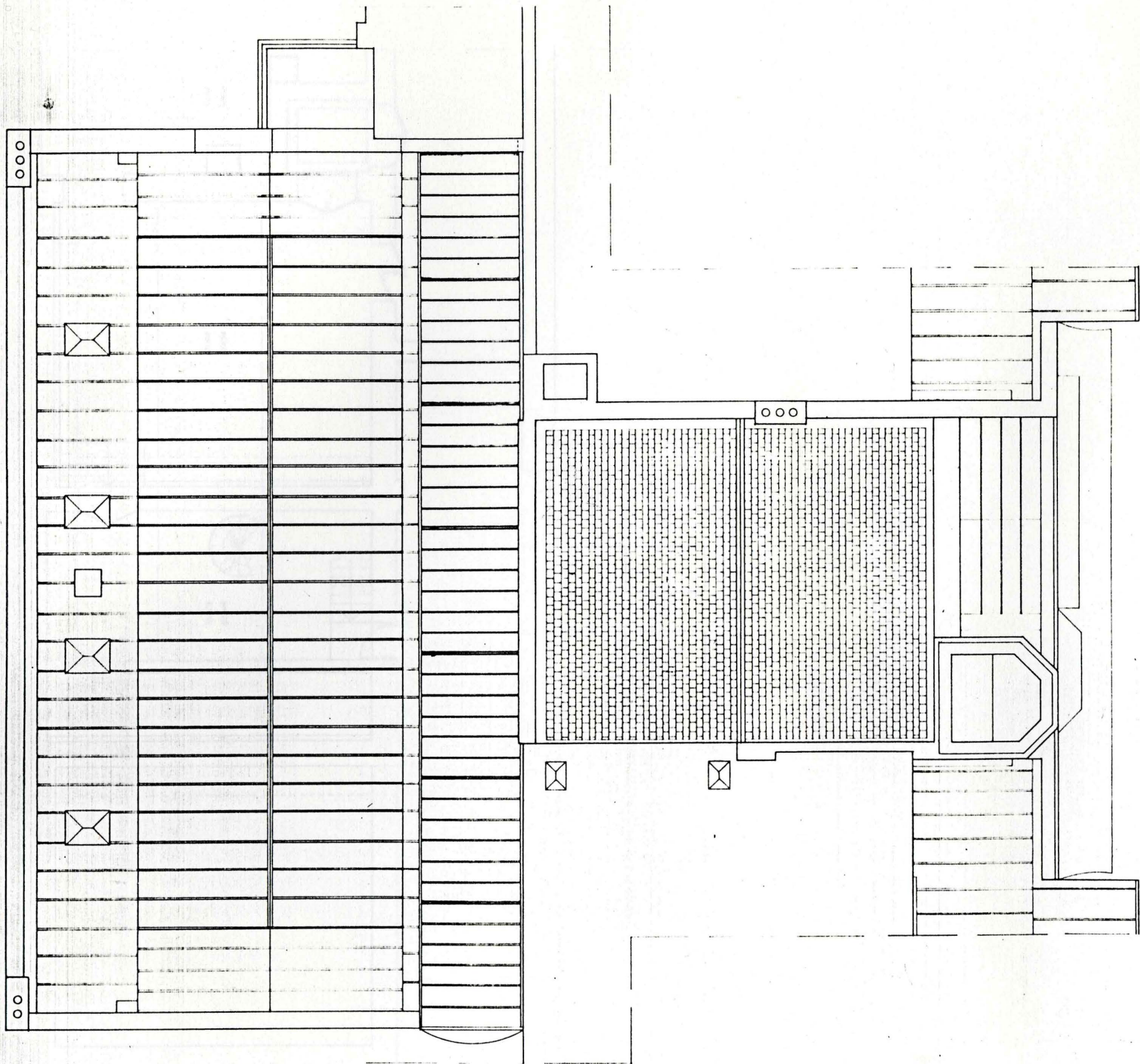
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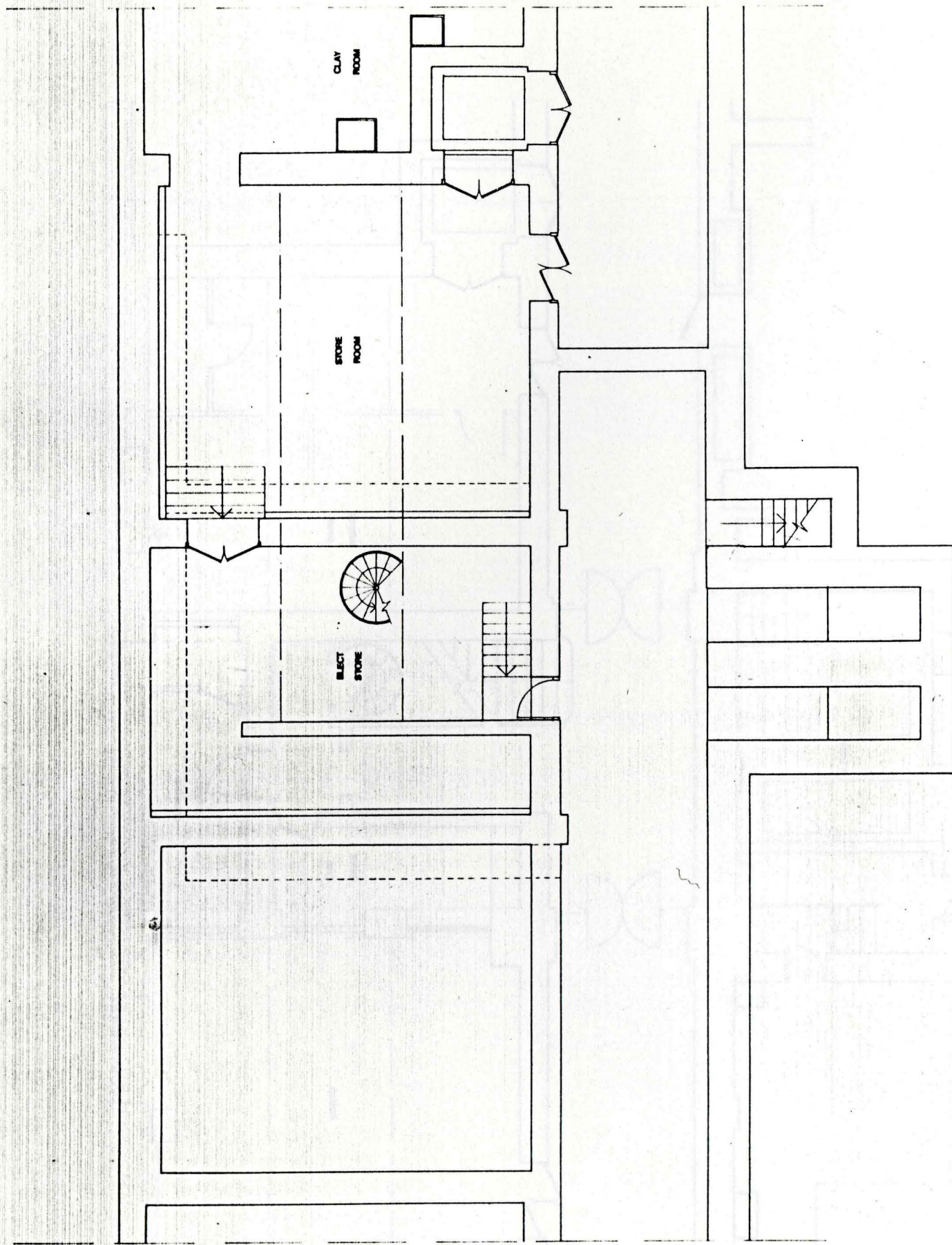
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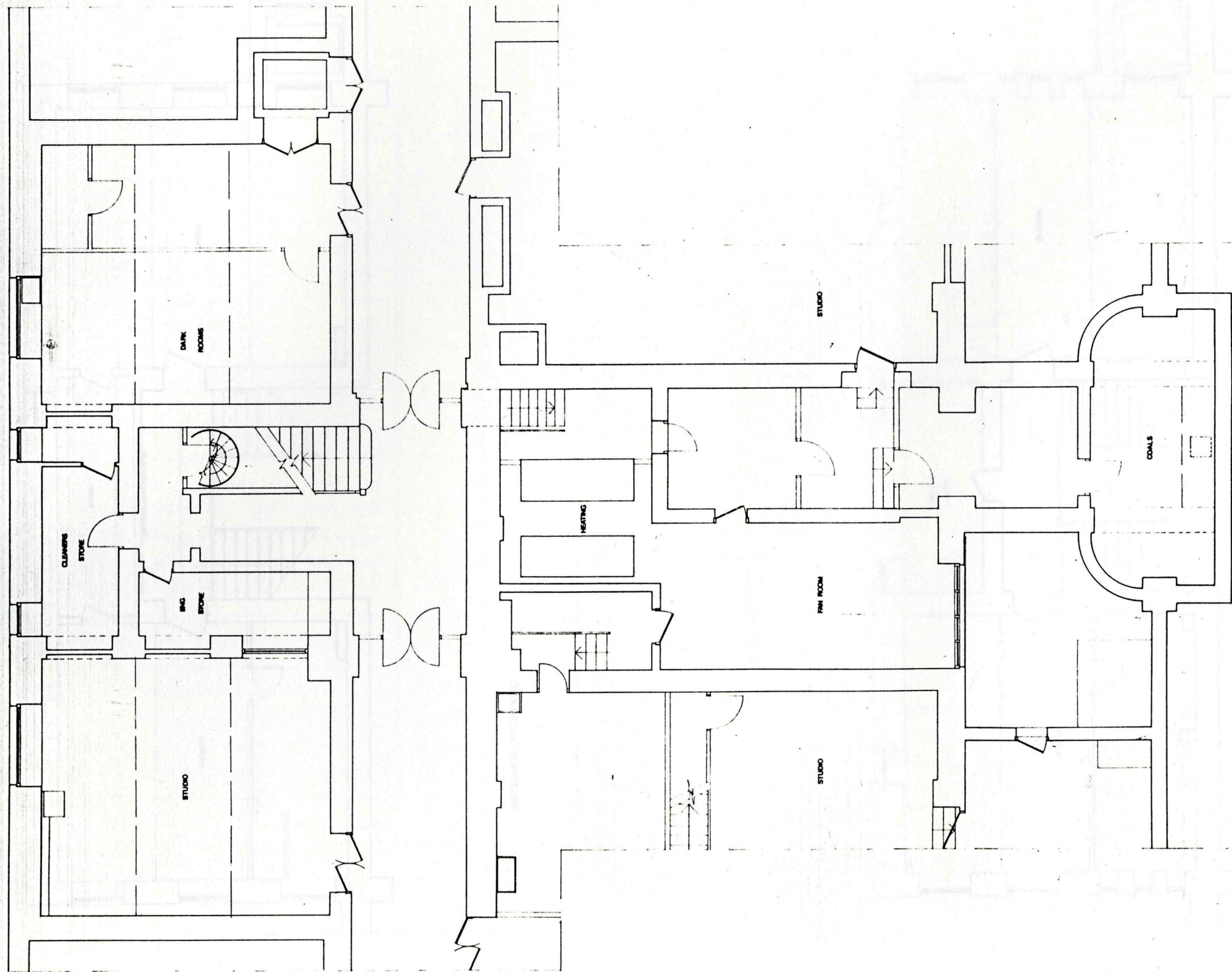
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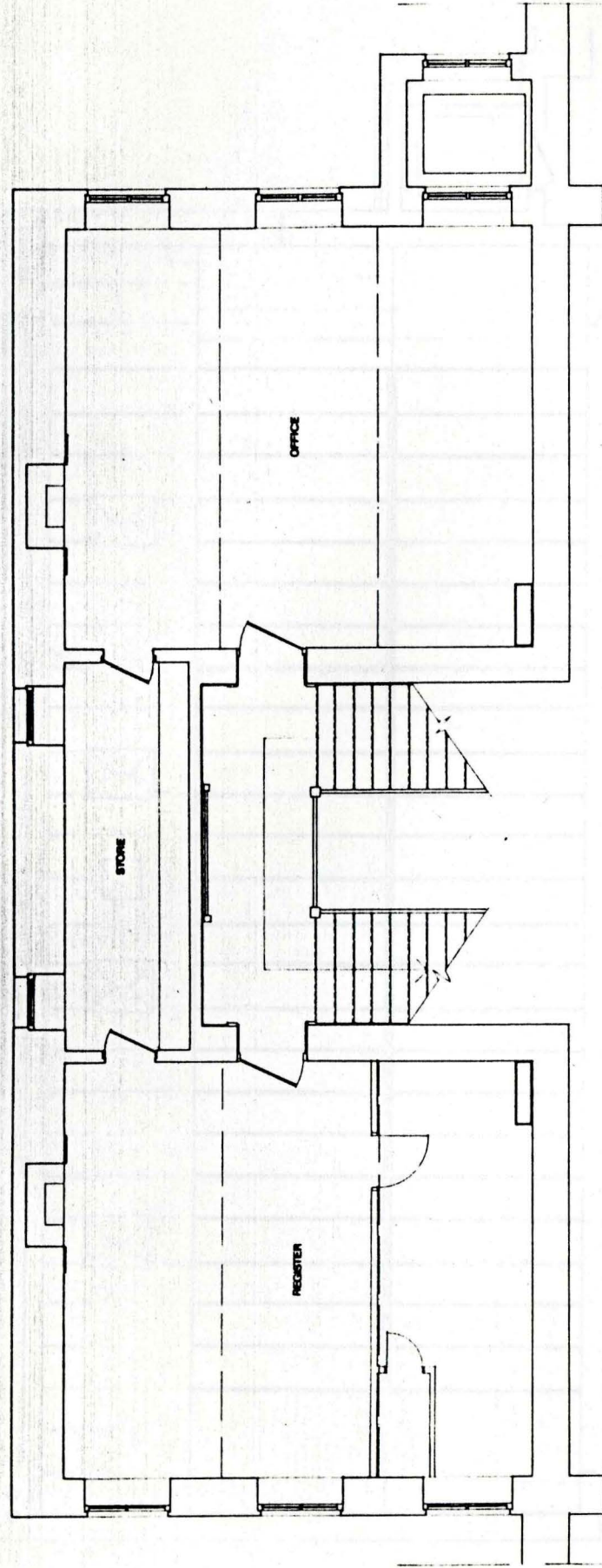
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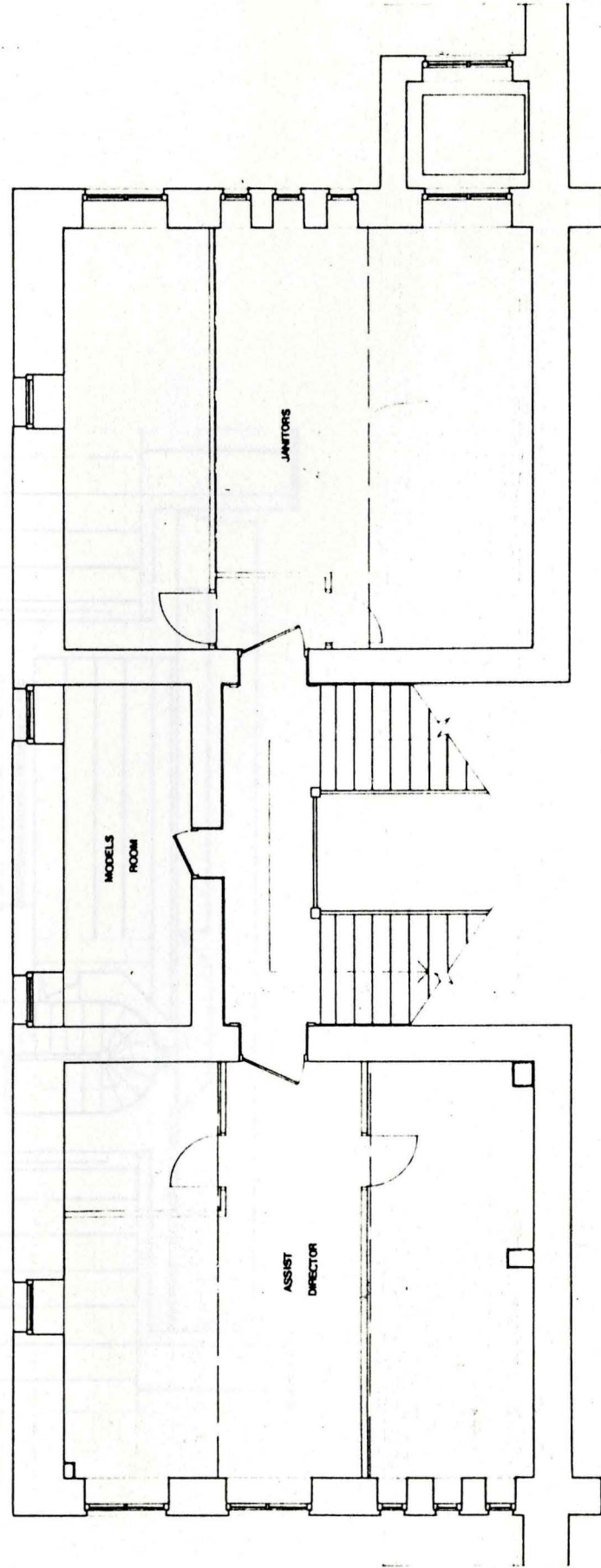
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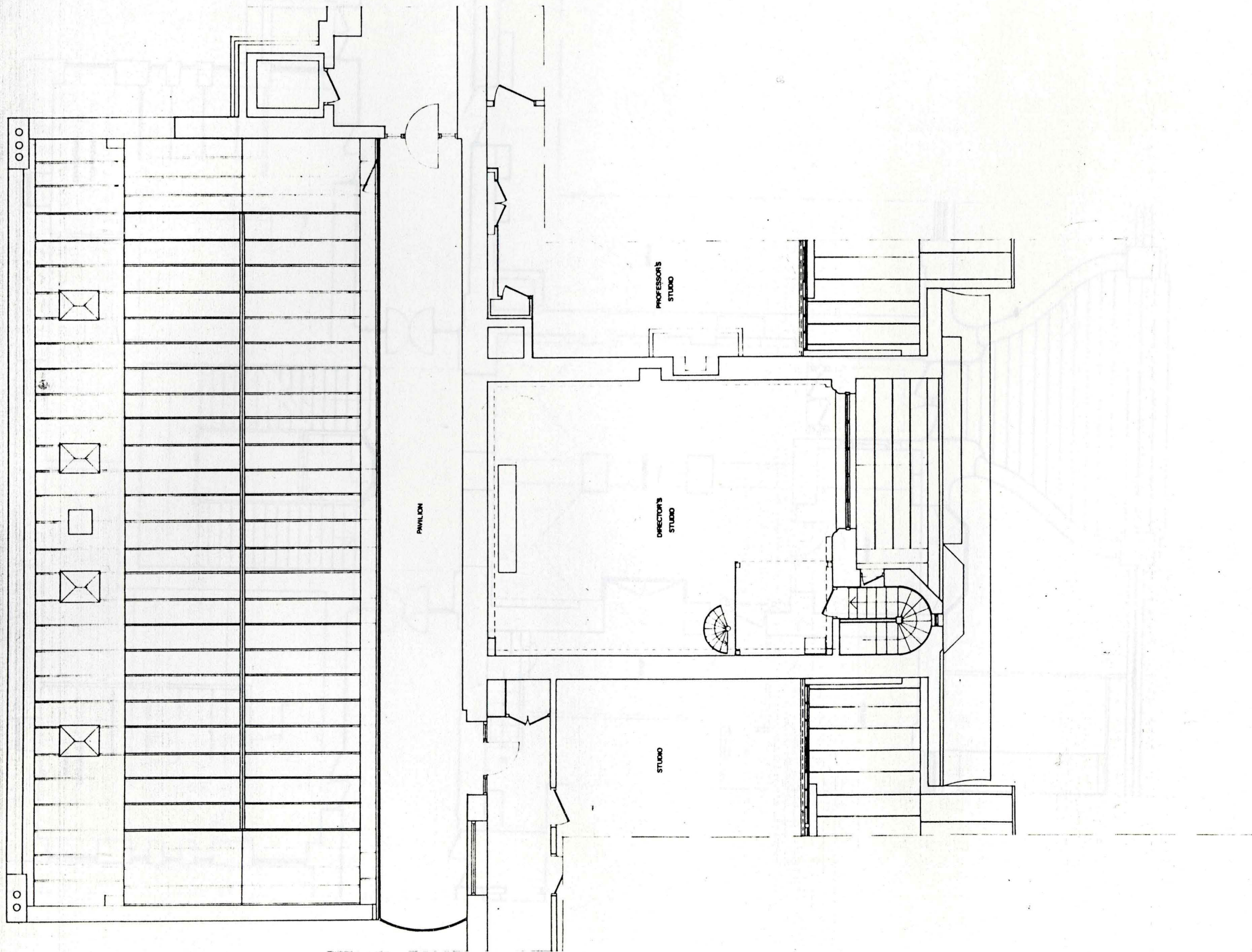
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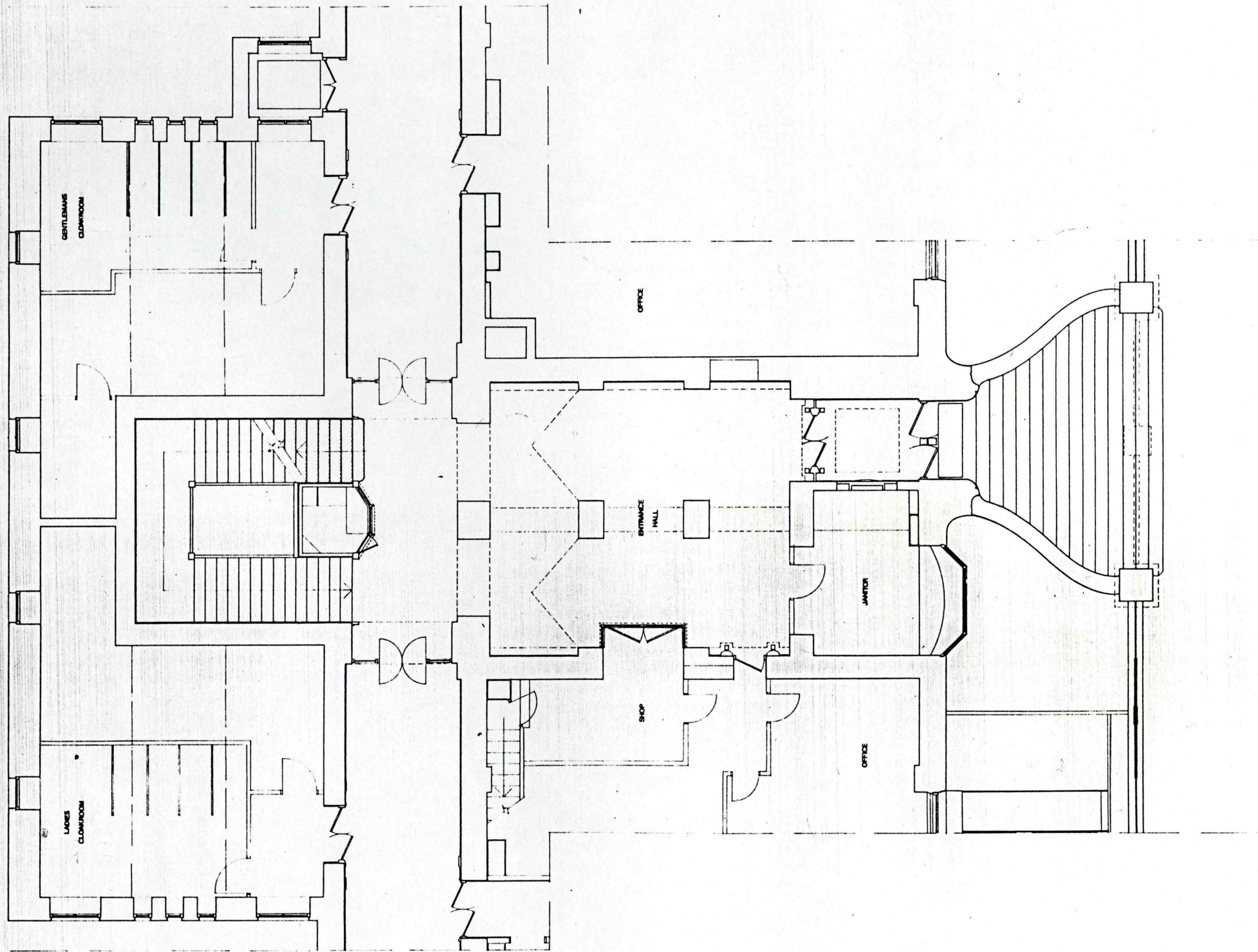
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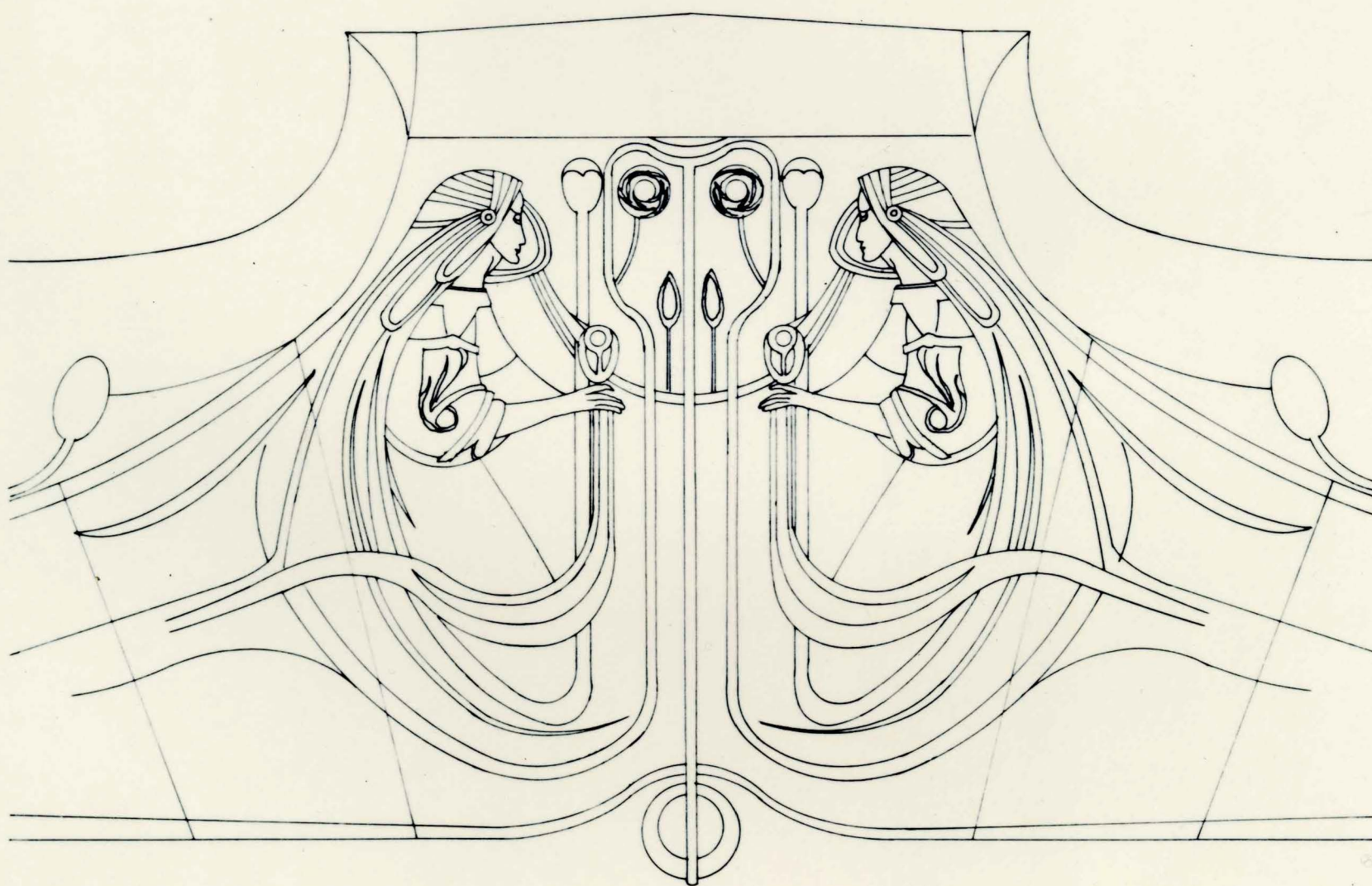
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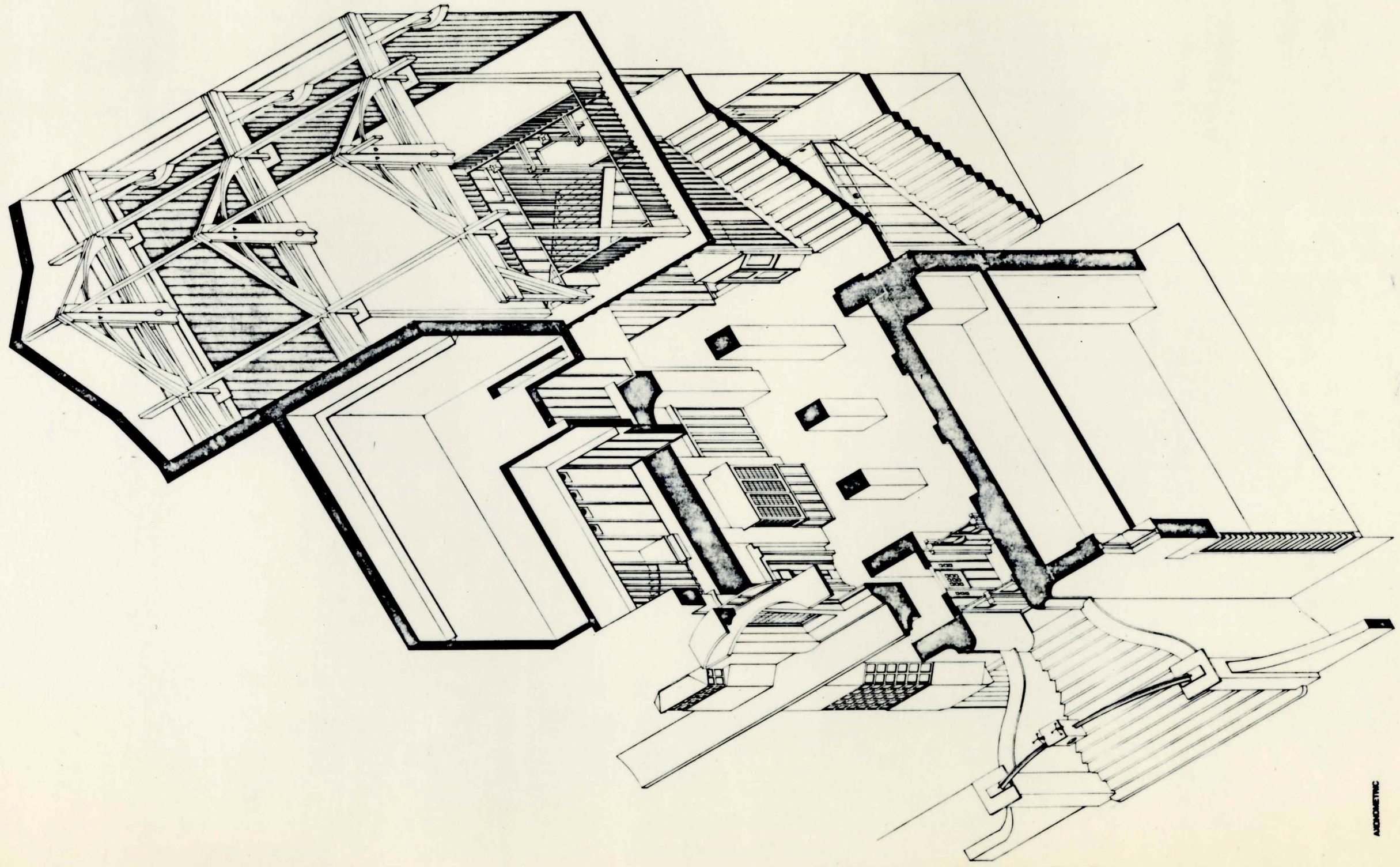
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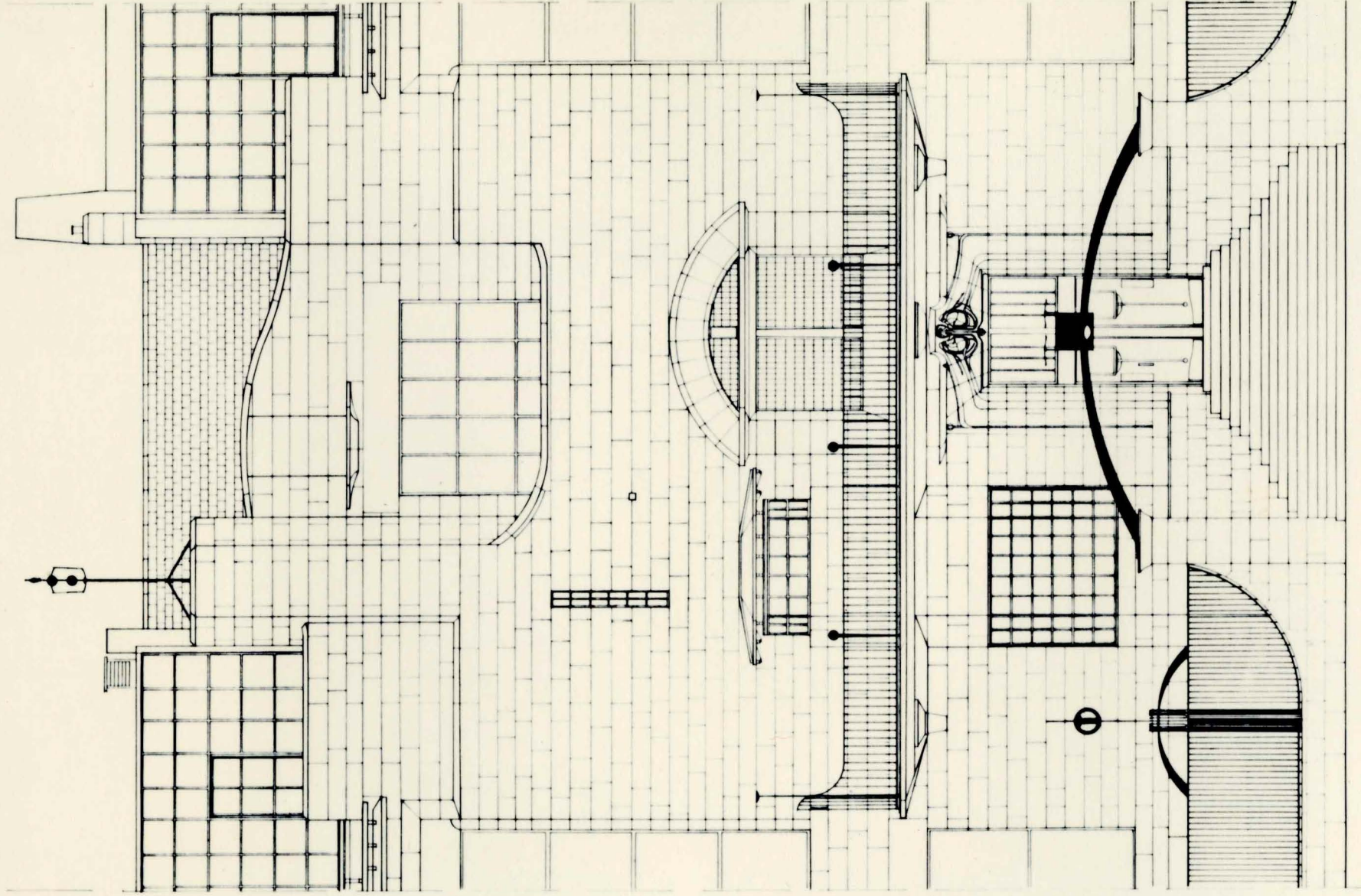


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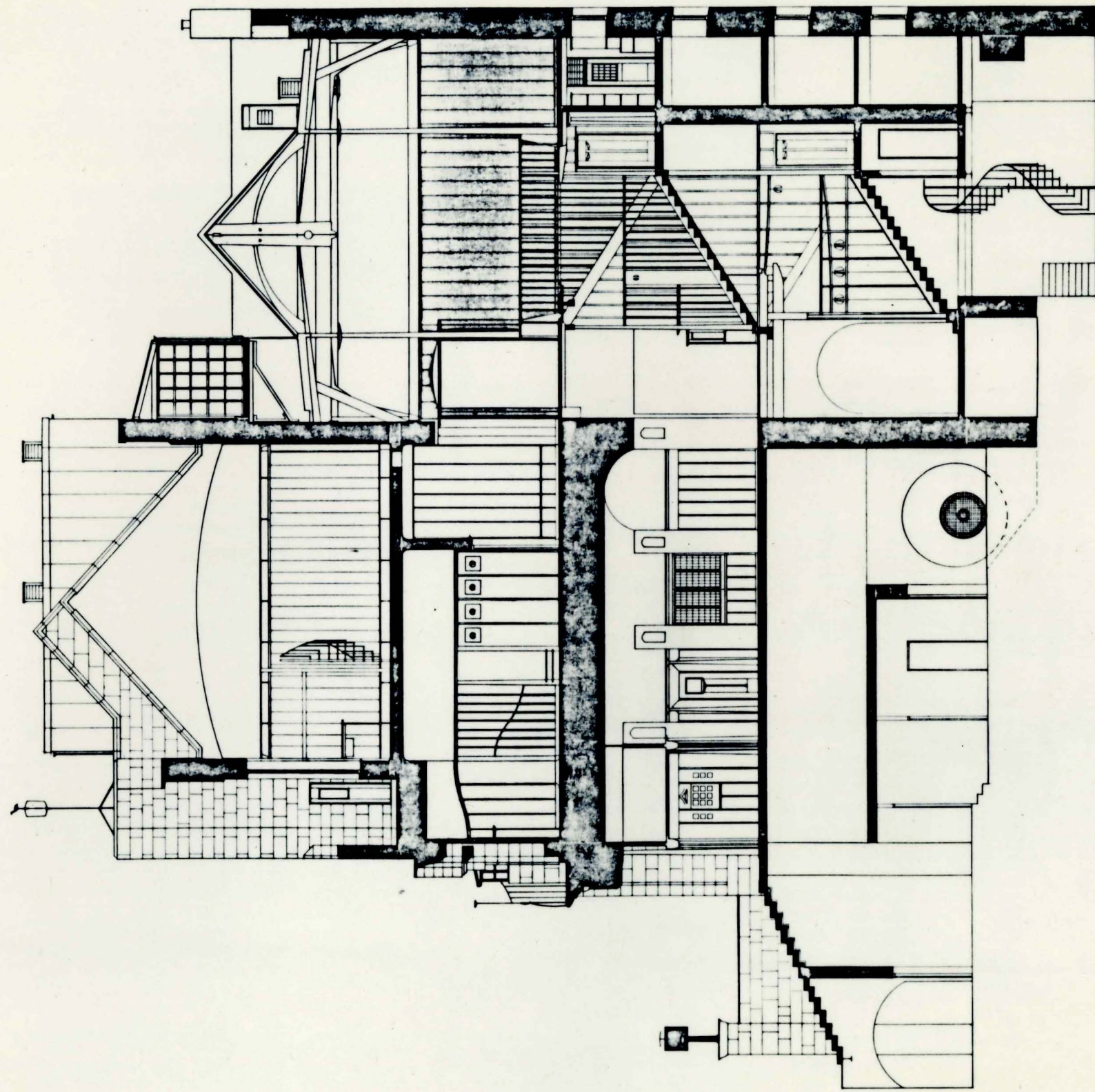


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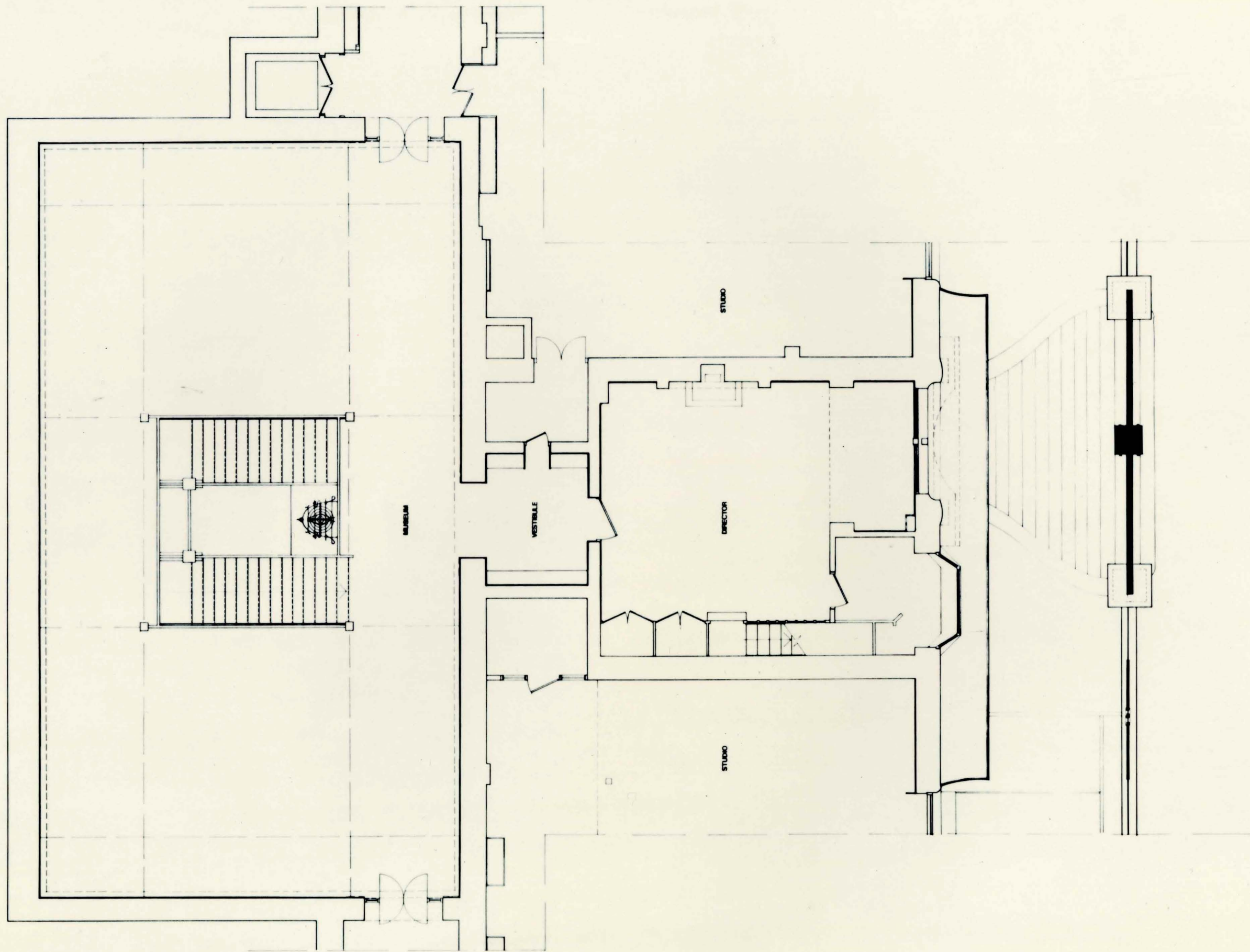




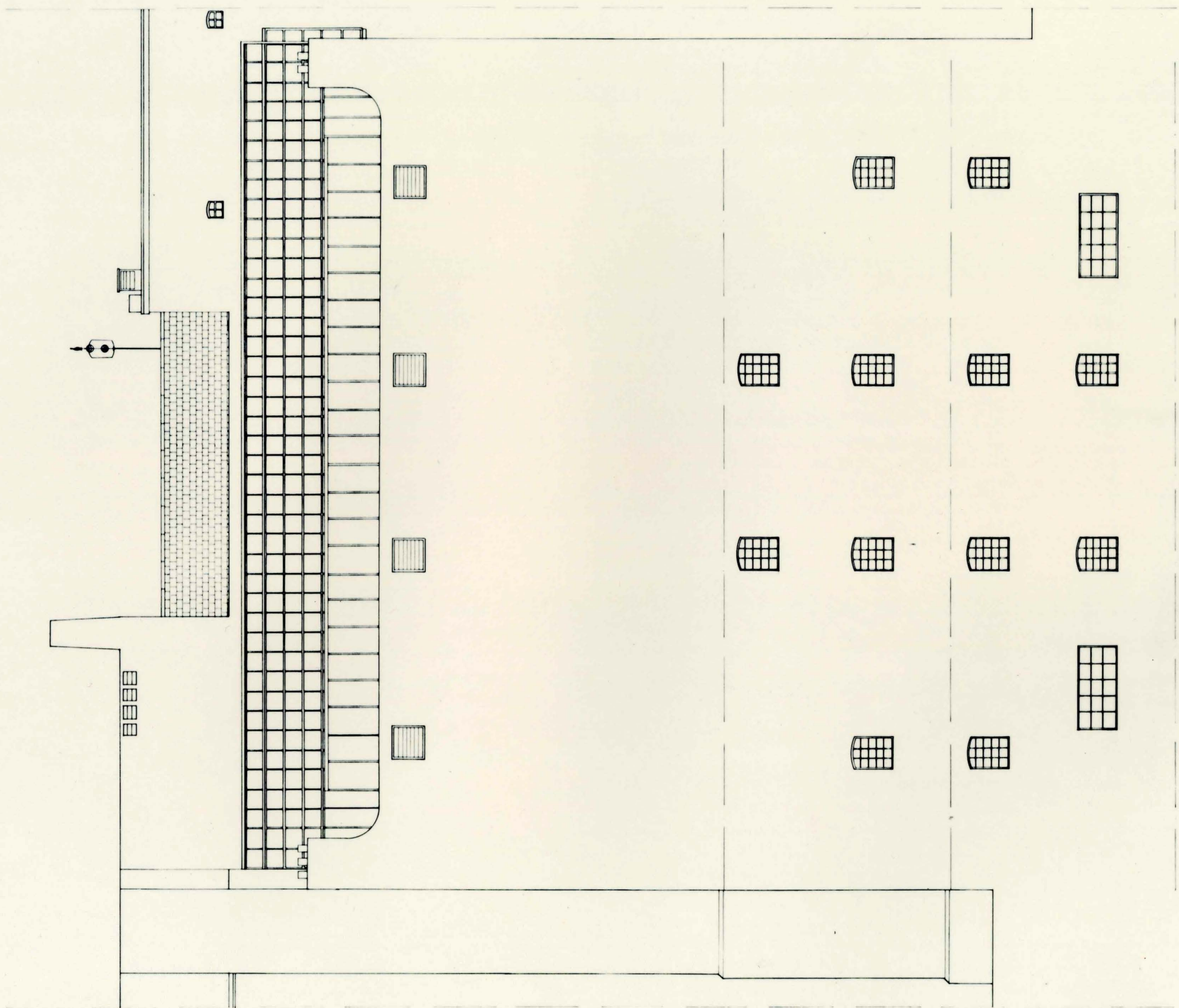
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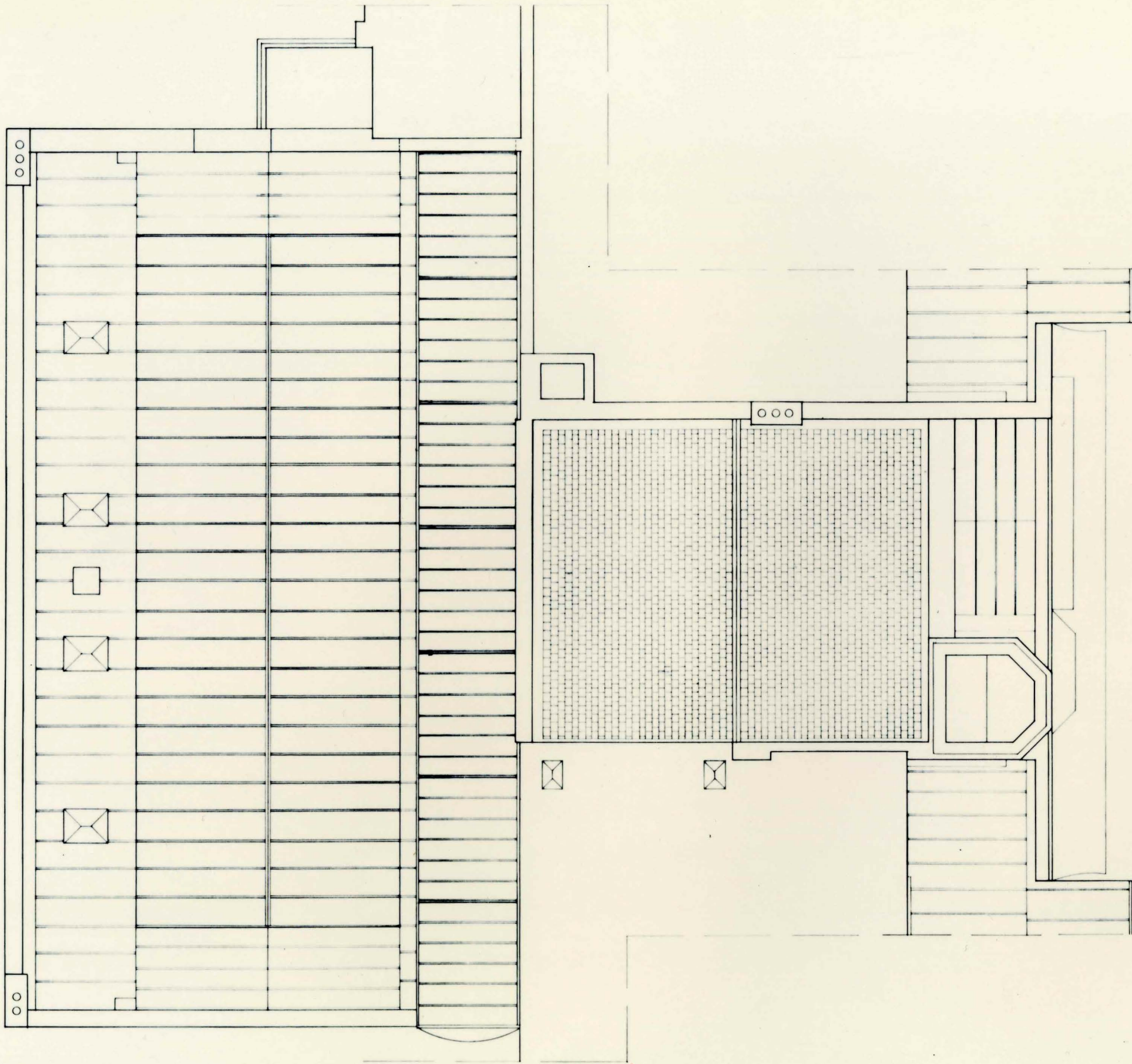
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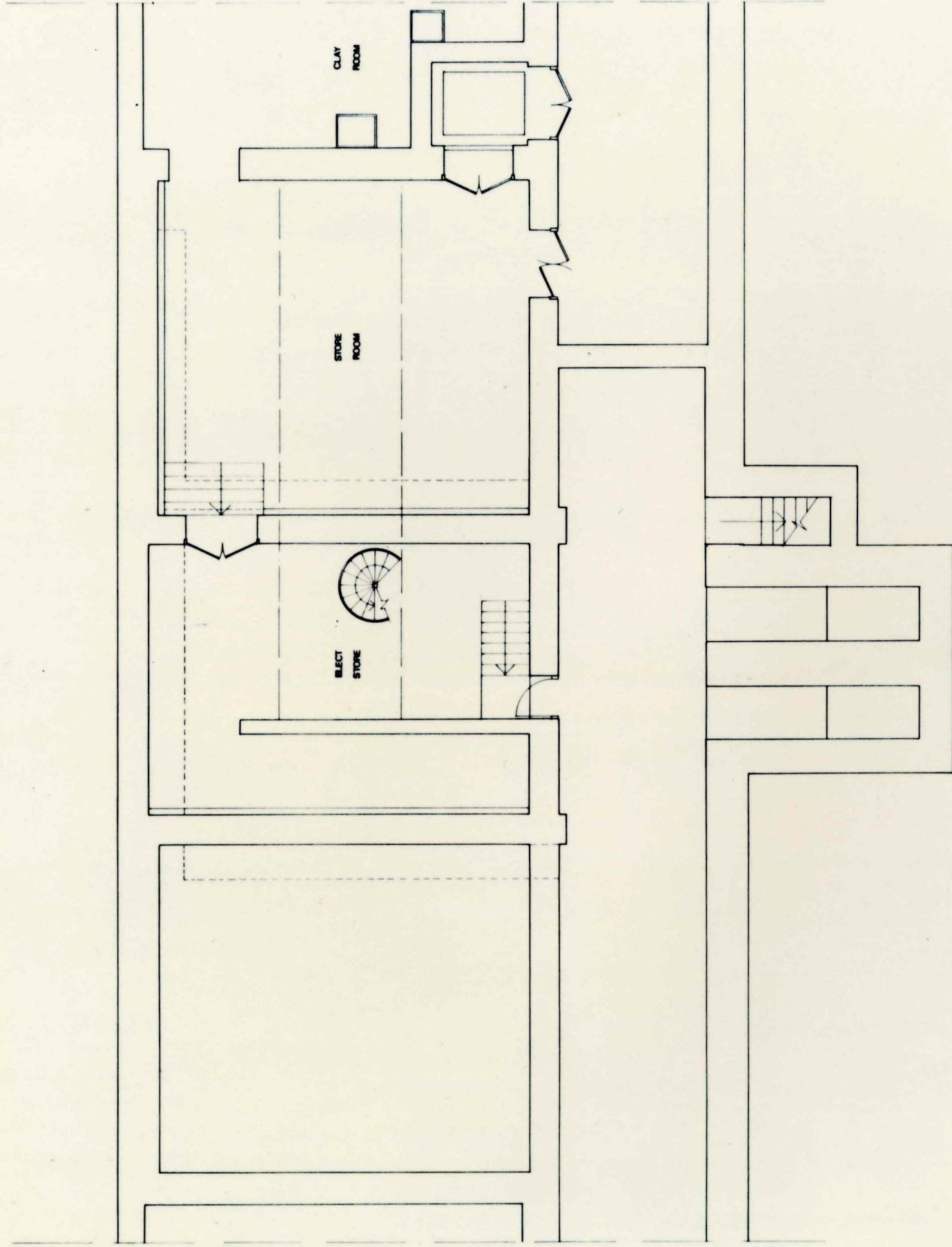
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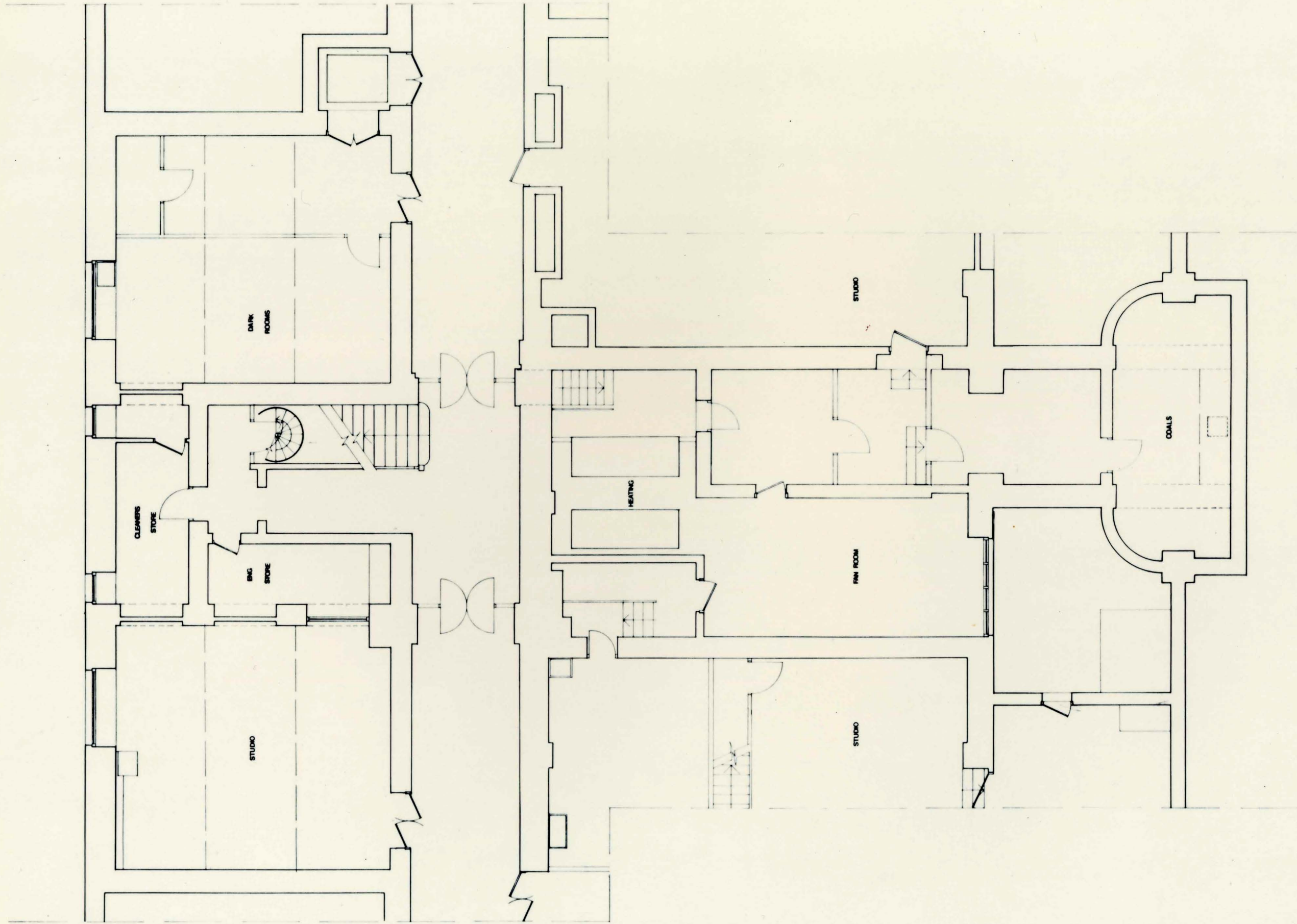
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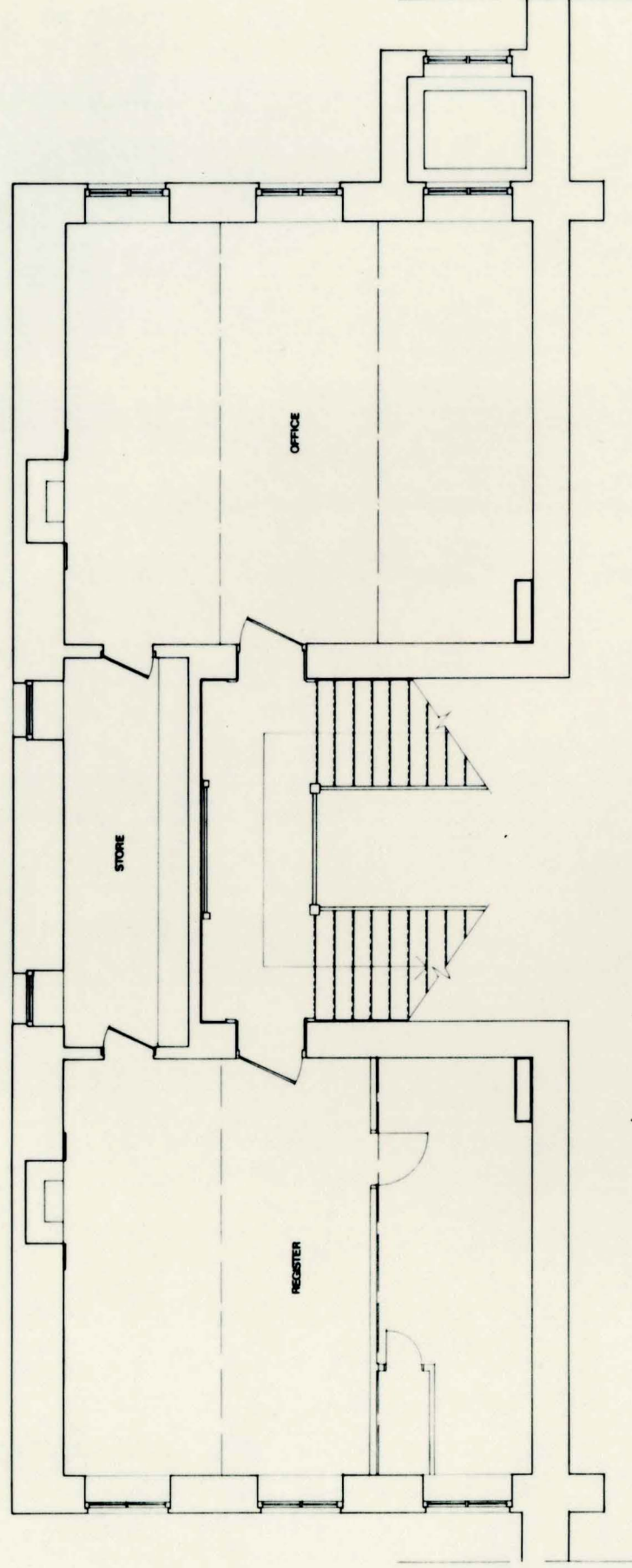
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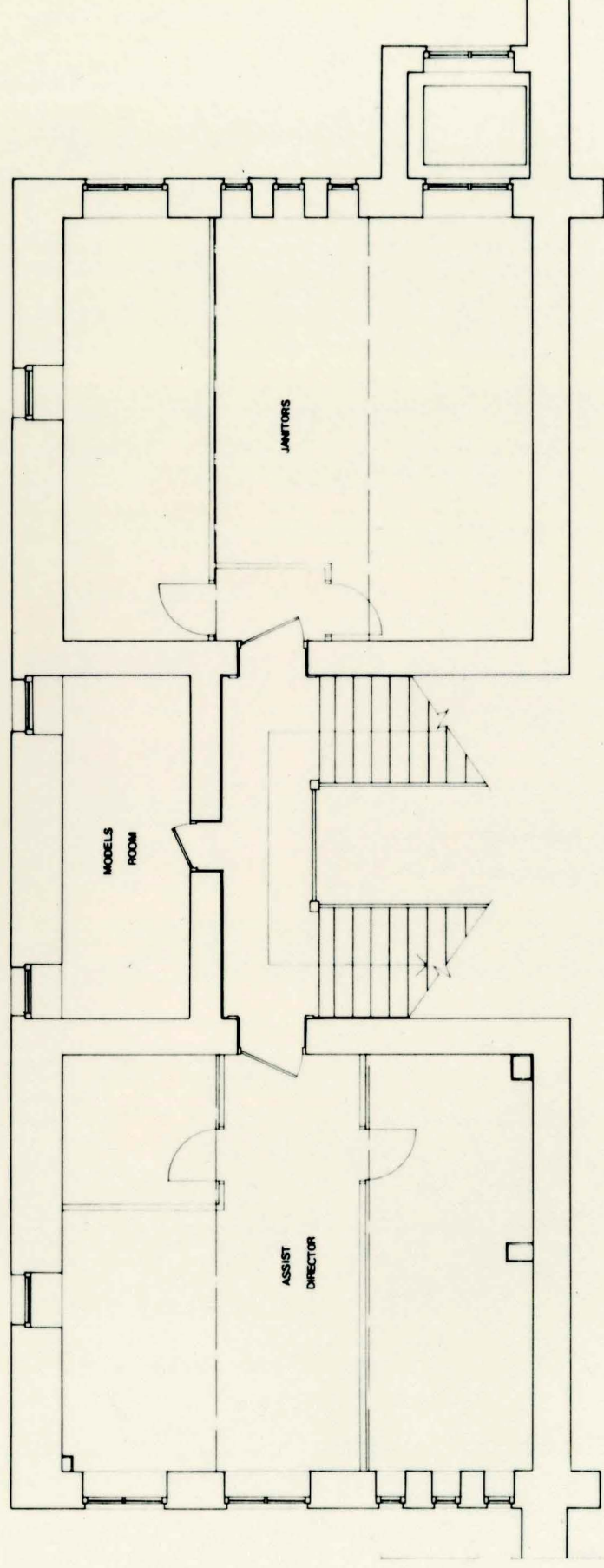
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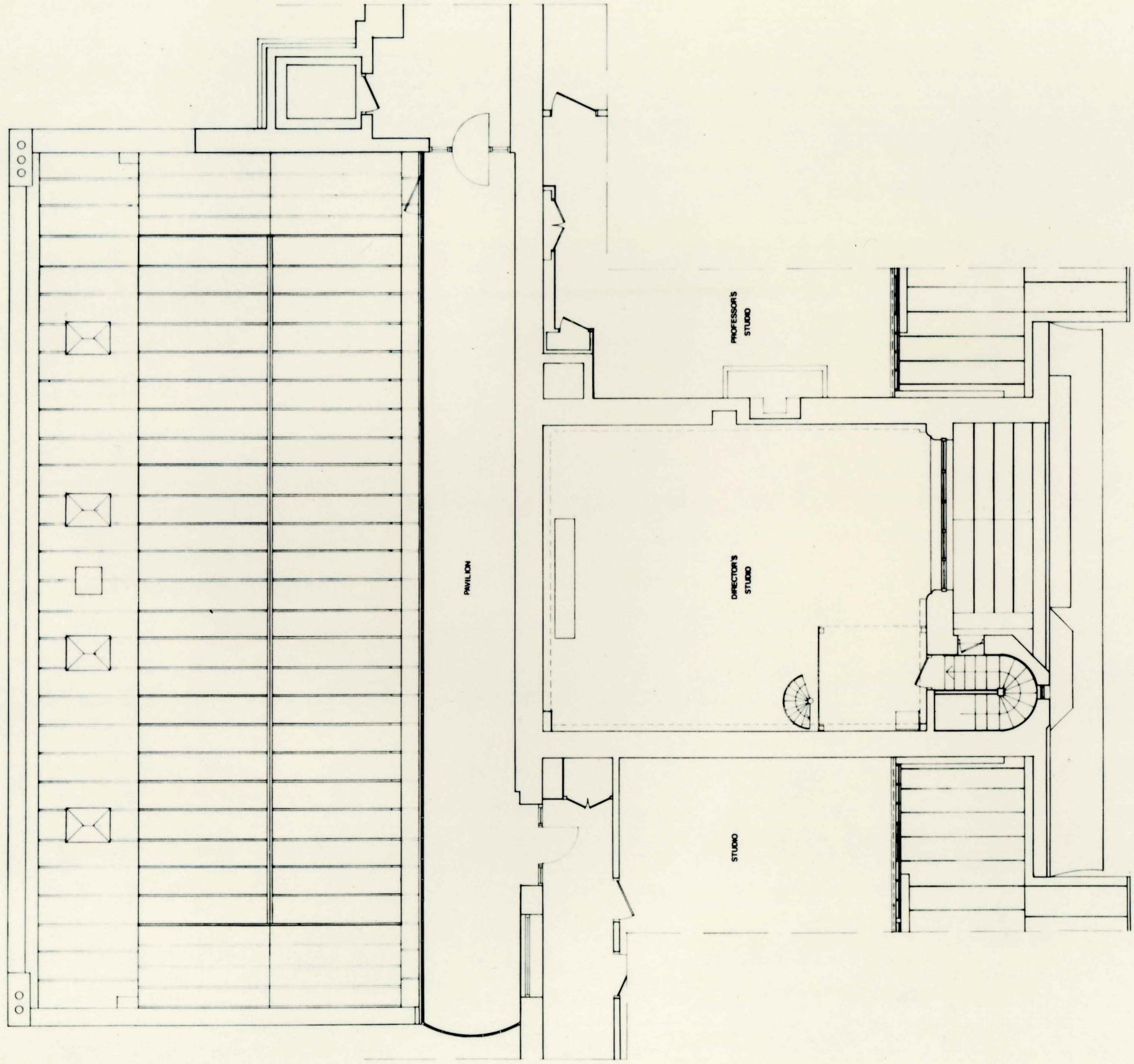
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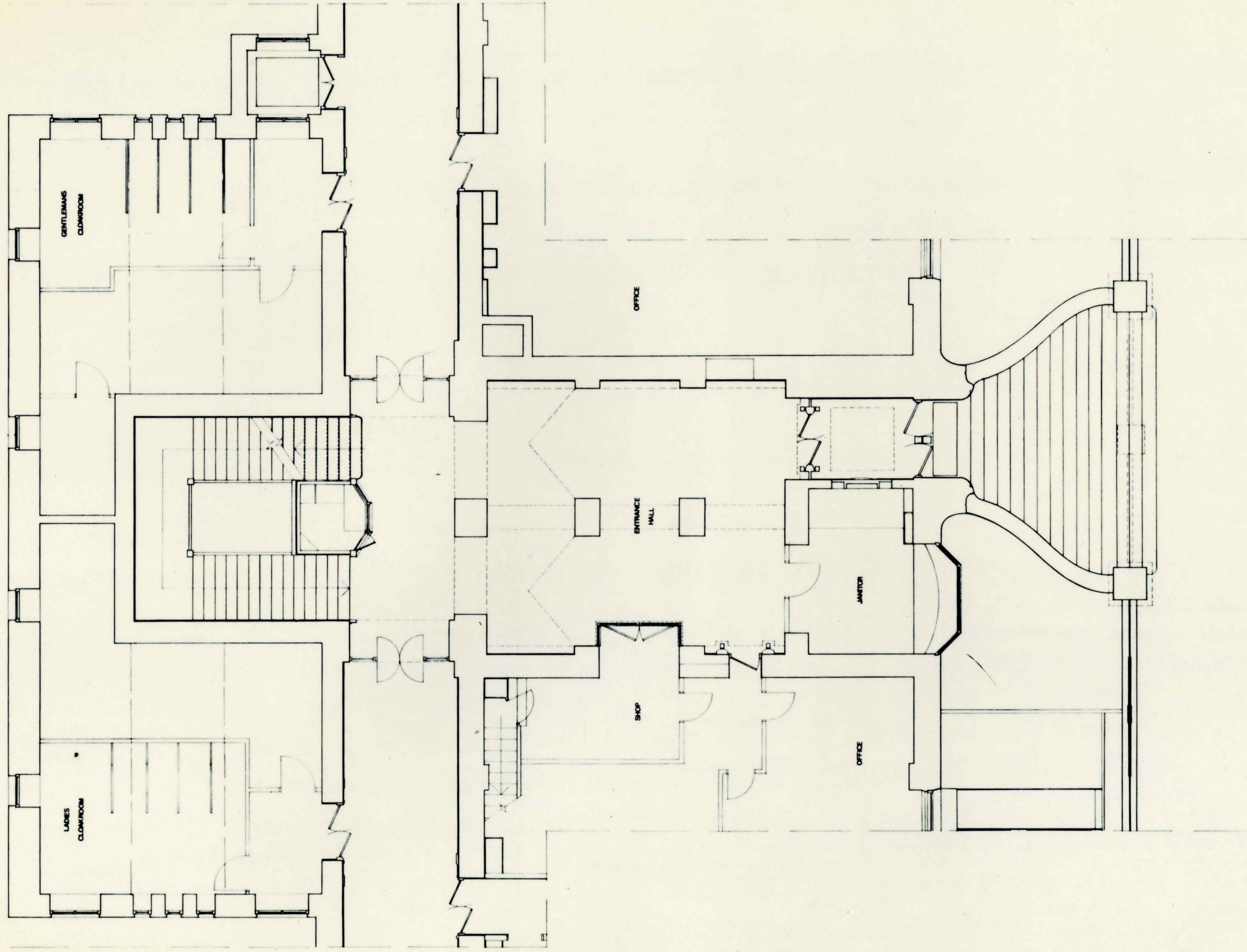
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SECOND FLOOR



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